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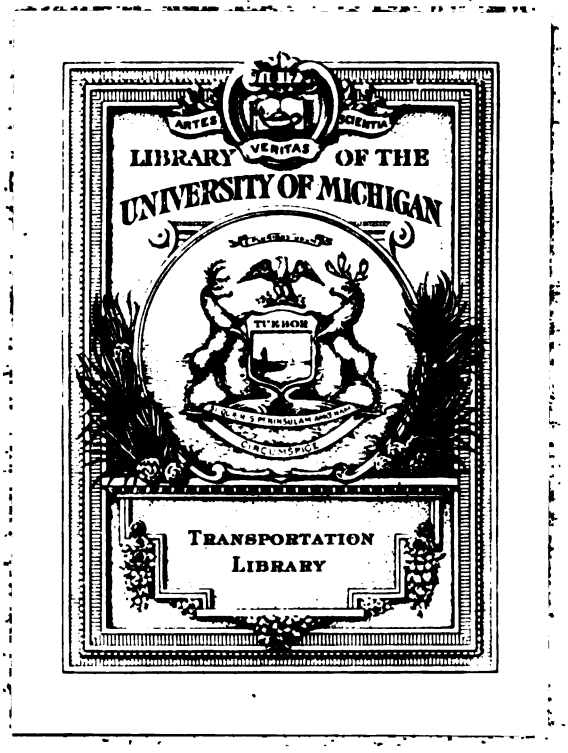
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ADVOCATE OF INTERNAL IMPROVEMENTS.

JULY, 1834, TO JANUARY, 1835.

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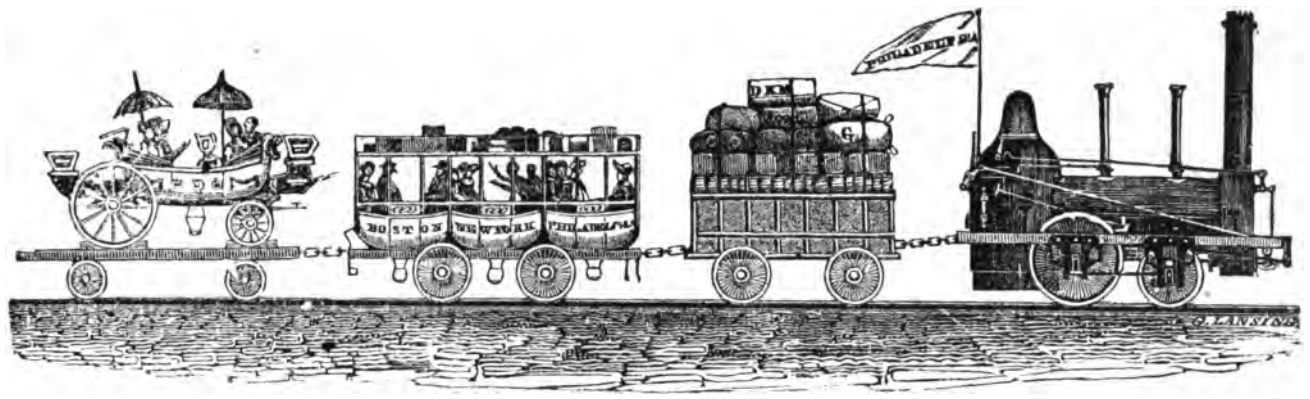

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JULY 12, 1834.

Railroads and Canals.—We have been often requested to give a concise account of the canals and railroads in the different States, and should long since have done so, could we have obtained the necessary information, which engineers and others on the different roads and canals have been so repeatedly requested to communicate. After much delay, a few short sketches of some of the most important works have been received, which, together with such as may be gleaned from the previous volumes of the Journal, will be published from time to time, as may be convenient. It is desired that any errors, if any should be published, relating to the different works, may be corrected by those having the means, at the earliest possible period, that we may correct them.

Extracts from the Common-Place Book of an Engineer.

Cumberland and Oxford Canal, Maine. — This canal, so called from the two counties through which it and its tributaries pass, is the only work of internal improvement of any importance in the State. It connects tide-water at Portland with the southern extremity of Sebago Pond, with which and its tributaries, it opens a communication of 40 miles with the back country. The canal itself is of small dimensions and yet, though it is made through a country abounding with the necessary materials, and not presenting any other than ordinary difficulties, it has cost the company the sum of $250,000, or about $12,500 per mile. The locks, 25 in number, are, with one exception, built of timber, and so badly has the work been executed, that there is scarcely one that does not stand in need of entire rebuilding. The stone lock at Portland is built for one-third of the distance up of small uncoursed masonry, upon which, for the remainder, immense masses of well cut granite are piled without the least judgment; and though well caulked with pieces of shingle! it can only be filled at half or at full tide. The canal is connected with the "Canal Bank," which is interested in it to the amount of $150,000; and though it had every disadvantage under which to labor, it last year (1833) yielded a nett income of $12,000, principally derived from the tolls on lumber.

New York and Pennsylvania Canals.—A captain of a steamboat, who recently arrived here from Louisville, relates the following anecdote:

While he was in Louisville he happened to be in the house of Mr. Buchanan, a commission merchant, when an agent from New York came in. This person had letters from the Canal Commissioners, or some other persons on the New York and Ohio Canals, and was endeavoring to induce men of business to make their shipments by the way of those improvements. He urged Mr. Buchanan very strongly upon the subject.

That gentlemen, in reply to his urgent application, said that the western folks would do their business where it could be done to the best advantage—that the Pennsylvania Canal seemed to suit them best; there, said he, are some goods which we have just received in twelve days from Philadelphia, at the expense of one dollar and thirty-seven and one half cents per hundred, and they are all in good order, which was seldom the case with goods brought by the New York Canal. Now, sir, continued Mr. Buchanan, if you can do our business as well, as speedily, and as cheaply, we may trade with you, otherwise we must prefer the Canal of Pennsylvania. The New Yorker admitted that, at present, they could not do business so favorably, but added that some mode must be contrived to counteract the facilities afforded by the Pennsylvania improvements. We were truly well pleased with this piece of intelligence, and publish it for the gratification of Pennsylvanians, and the information of New Yorkers.—We have no objections to the enterprize and exertions of our northern neighbors, but we feel confident that their efforts will be unavailing. The four hundred and odd miles of New York Canal, the three hundred and odd miles of Ohio Canal, the two hundred miles of Lake navigation, and above all, the long obstruction of the Lake with ice, excludes New York from a fair competition with Pennsylvania for the western trade.

If the "empire State" can ever successfully compete with this State for that trrade, she must do it through some improvement which will not be subjected to the risk and delay and precariousness of a Lake passage. We believe, after much reflection, that her safest reliance would be on a canal from the New York Canal to the Allegany river, from Rochester, for instance, to Olean.

[New York would do better by turning her attention to the *far* West, and securing the growing trade of Indiana, Illinois and Missouri, by promoting as much as lies in her power a railroad from Detroit to Chicago, and a steamboat canal from Lake Michigan to the Illinois river.]

Report of the Directors of the Boston and Worcester Railroad, to the Stockholders, at their third Annual Meeting, June 2, 1834.

The Directors of the Boston and Worcester Railroad Corporation respectfully report, That since the last meeting of the Stockholders, they have prosecuted the work upon the railroad with as much vigor as they have thought practicable, consistently with a due regard to economy; and every part of the work which remains to be completed is now in progress.

The grading of the road and the laying of the rails is completed on the first division, extending from Washington street in Boston, to Needham, a distance of twelve and a half miles. All that remains for the completion of this part of the road is to dress off and finish some parts of the cuttings, embankments, and a small portion of the horse paths—to fill in with earth some parts of the road across the receiving basin of the Mill Dam—and to complete the side railings and fences along some parts of the road.

On the second division of the railroad, extending from Needham to Southborough, a distance of thirteen miles, the grading is finished, with the exception of the high embankment at Morse's Mills in Natick, and the cutting through a ledge at the next summit beyond this embankment. The work has been delayed at these two points in consequence of the failure of the contractors, but it is now going on rapidly, and it is expected that it will be finished in about three months. There is also some little work to be done in dressing off the other sections on this division.

The laying of the rails on this division is just commenced, and it is intended that it shall go on steadily and rapidly, so as to be finished nearly as soon as the cutting and embankment, at the points above mentioned, shall be completed.

The grading of the third division, extending from Southborough to Worcester, a distance of seventeen miles, is all under contract, with the exception of about a mile in the town of Worcester. The work on the first five or six miles of the division, extending to Westborough meeting-house, has been delayed by the wet weather and the unusual quantity of water on the low ground through which the route passes, and also by the failure of a contractor on the most difficult section. The grading is now finished for about half the distance, and it is expected that the residue will be completed by the 1st of September. The contracts on the remainder of the division are to be completed by the month of March next. The work is now in the hands of enterprising contractors, and it is going on successfully.

On two or three of the sections there is a

large amount of rock excavation, but the quantity does not appear to be greater than was originally estimated. It is not of a difficult kind, and nothing has yet occurred to induce a belief that the cost of accomplishing it will exceed the original estimate. The Directors have lately purchased a lot of land for a depot at the termination of the railroad in Worcester, situated on Main street, near the centre of population and business in the town, and to this point the road will soon be located.

This location will afford a very eligible situation for a public house at the termination of the road, should any one be disposed to purchase it for that purpose. Until the erection of such a house, the present buildings will afford all the necessary accommodations for the reception and discharge of passengers, and the termination being between the principal public houses in the town, will be as convenient for travellers as any that could be selected. The land purchased will also afford convenient sites for store houses, for the transaction of all kinds of business, and for the necessary car and engine houses, and shops for the building and repair of cars.

Provision has also been made for a convenient merchandize depot on the Blackstone canal, at the place where the railroad track crosses it. Several gentlemen in Worcester, owning estates adjoining the proposed depot, have made liberal contributions in land and money towards the accommodations thus procured. The Directors have purchased another lot of land in Worcester, through which the railroad will pass, a part of which only will be necessary for the purposes of the road; it being intended that the residue shall be sold when the railroad shall be located, and the parts laid out, which it will be necessary to retain.

The railroad was opened for the conveyance of passengers between Boston and Newtown, a distance of eight and a half miles, on the 16th of April last. A locomotive engine has been run three times daily to Netown and back, with from two to eight passenger cars at each trip.

The passage each way is usually made in about 28 minutes, making an average speed of 18 miles an hour. The engine may be made to travel at a much more rapid rate, with apparent safety, but this speed has been thought sufficient for the usual rate of travelling. These passages have been chiefly made by the "Meteor" engine, which was built by Mr. Stephenson in England. It is a light engine, but of a fine model, well built, and for its size of great power. Another engine, built in Philadelphia, has been used on the road on trial, constructed for the burning of anthracite coal. The practicability of using this fuel to advantage has not yet been fully tested. A third engine is now building at the Mill Dam Foundry in Roxbury, nearly after the model of the Meteor, but of larger size, which the Directors hope to have placed upon the road before the end of the present month. A fourth engine, of similar dimensions, has been ordered from England.

The completion of the part of the first division of the road, near Needham, was unexpectedly delayed by the unusual quantity of water which obstructed the excavation through the lower part of the ledge, and through the valley beyond, it being necessary to drain this valley through the opening made for the road through the ledge. Preparations have been made for extending the regular trips of the engine and passenger cars to Needham, and it is expected that arrangements will soon be made with several lines of stage coaches to meet the railroad cars at that place. The period for making the usual passage on this route to and from Boston, will thus be shortened about one hour.

The number of passengers who have been conveyed on the railroad since its opening, counting the passages in each direction, is 11,256; and the amount of passage money received is $4,043 07. On the afternoon trips, when the weather has been favorable, there have been usually as many passengers as could be accommodated in the cars, the average number daily, for thirteen days in April, was 222, and the daily average in May was 310.

The stone rubble for laying the foundation for the rails on a great part of the second division is already prepared. The sleepers are purchased and are chiefly delivered on the line. Iron sufficient for five or six miles of the distance is already received. A further quantity is now on the passage from England, and a sufficient quantity for completing the road to Westborough is expected to arrive in the ensuing two months.

The laying of the rails on this division will be rapidly prosecuted, and it is intended that it shall be completed very shortly after the completion of the excavation and embankment on the most difficult parts. It is hoped, therefore, that the whole of this division may be opened for use by the month of September next.

The first portion of the third division, extending as far as Westborough, it is anticipated will be opened in the course of the ensuing autumn, and the residue of the road to Worcester will be completed the next season.

The land for the track of the railroad, as well as for depots in Boston, Worcester, and at the intervening places, at which they will be required, has been nearly all purchased and paid for, and the damages to estates passed through, with the exception of a few cases, have been adjusted to the satisfaction of the proprietors.

The sum of $60 has been assessed on each share of the capital stock, amounting to $600,000, of which $573,535 have been paid.

There has also been received $4,950 16 for interest, chiefly on money deposited in the City Bank, and $4,043 07 for passage money, making the aggregate of receipts into the treasury $582,528 23. The whole amount of expenditures to the 31st ultimo amounted to $527,601 24, leaving on hand a balance of $54,926 99.

Every part of the work is believed by the Directors to be going on successfully, and nothing has come to their knowledge to diminish their confidence in the practicability of completing it at a cost not differing materially from the original estimate, or in the utility and profitableness of the undertaking.

Recent proofs of the present amount of travelling on the route justify the belief that the number of passengers conveyed on the road will exceed the original estimate.

The experience already acquired on that part of the road now completed, fully proves the practicability of making the passage regularly between Boston and Worcester, when the road shall be completed, in the space of two and a half hours; and the ease and pleasantness of the mode of conveyance, independently of the saving of time and expense, will give it a preference over any other mode now in practice. All which is respectfully submitted.

NATHAN HALE,
DAVID HENSHAW,
GEORGE BOND,
HENRY WILLIAMS,
ELIPHALET WILLIAMS,
SAM'L HENSHAW,
DANIEL DENNY,
EDW'D ELDRIDGE.

Address of the Committee of Correspondence of New-Hanover County, to the Citizens of North Carolina.

Fellow Citizens: It is well known to you, that, among other important proceedings of the Convention which met at Raleigh, in November last, to deliberate upon the subject of internal improvement, a resolution was passed, authorizing the president to appoint a committee of ten members, "*to* disseminate information on the subject of internal improvement, and to publish an address." This address has been anxiously looked for; and, after a delay which afforded the members ample time for examination and reflection, it has at length appeared, under the sanction of some of the most enlightened and distinguished men of the State. The information which the committee have disseminated in this address is so very extraordinary, and the conclusion to which it has come, so ruinous, in our estimation, to the interests of North Carolina, that we deem it our duty to expose its errors, and to call your attention, calmly and impartially, to its leading features, that you may pause before you give your assent to the fatal policy it advocates. The sum and substance of the Address is this: North Carolina is in a most deplorable condition, destitute alike of natural advantages and the resources of art, without seaport towns or harbors, without shipping, "with a *total* absence of commerce, of manufactures, and under a defective system of agriculture." Norfolk, in Virginia, "is undoubtedly one of the finest harbors on the continent, if not, under all circumstances, the very best." Therefore, as the time has arrived, when, excited by the example of successful experiment, and urged by the imperious nature of our necessities, North Carolina must arise and perform her part of the great system of internal improvement, going on all around us, a railway should be extended to Fayetteville, or to our southern boundary, (some point on the South Carolina line,) from the head of the Petersburg railway, to be also connected with the Norfolk Railway. After which, provided this experiment succeeds, a general plan of internal improvement should be adopted, equal to the wants of the whole State, so as to allay local jealousies.

That this committee, consisting of enlightened and distinguished men, professing to impart correct information to the citizens of the State, with the means of obtaining the most precise knowledge of facts within their reach, and abundant time for the research, should have so misrepresented the case, and calumniated the State, is more incomprehensible to us, than that they should sacrifice state pride on the altar of self-interest, and become willing to make North Carolina for ever tributary to Virginia.

The committee represent North Carolina,

1. As being destitute of seaport towns or harbors.

2. As possessing no mercantile marine beyond a few miserable coasters, and a few keel and steam boats of inconsiderable burden and value, for our inland trade, and some of these are owned in a neighboring State.

3. "*With a total absence of Commerce!*"

Now, let us advert to facts, fellow-citizens, and see how they will, on examination, sustain these three positions. And

1. We affirm that Wilmington is a seaport town, and that it possesses a safe and commodious harbor, protected by a most formidable fort. On the average of spring tides, with easterly winds, which prevail during the winter, vessels drawing 12 feet come to, and sail from, the wharves, without touching; in some instances, as during the past winter, 13 feet 3 inches have been carried to the wharves. When the tides are low, and westerly winds prevail, the average draught of water may be stated at 10 feet. With the highest spring tides, and the wind favorable, vessels drawing 15 or even 16 feet can pass safely over the main bar. On average tides, 14 feet can be carried over. This is better water than can be found in Mobile bay, or on Mobile bar, where there is as much trade carried on as there is at Norfolk; and Mobile is well known to be a seaport of great and increasing importance. The main bar of the Mississippi has but very little, if any, more water than is found on the main bar of Cape Fear during the period of the highest tides. It is evident that Wilmington is *one* seaport in the State with a safe harbor, superior in advantages to Mobile, very little inferior to Orleans, and wanting only a communication with the interior of the State to place her in the first rank among the seaports of the South. But the advantages of Beaufort, as a seaport, are even superior to those of Wilmington. We have not, it is true, the advantage of *persons*

knowledge of facts, as in the case of Wilmington, but we have sufficient testimony to authorise us to state that Beaufort may be rendered equal to any seaport in the Southern States. The average depth on the bar is said to be 20 feet, and the best water 22 feet; 14 or 15 feet can be carried to the mouth of Newport river, where the harbor is perfectly safe, and 10 or 12 feet may be carried to the North Point. It is probable that secure anchorage may be obtained where there is a greater depth of water than at either of the places already mentioned, by the construction of a pier or breakwater. With respect to inland navigation, no place is more favorably situated than Beaufort, the Sound into which the Neuse, Roanoke, Tar, Chowan, and Pasquotank rivers flow, being navigable for coasters and steamboats throughout. The only objection to either place is the want of communication with the back country, a point conceded by the Committee when speaking of Norfolk; and this communication may be opened by the action of the State Legislature as easily with either or both, as with Petersburg or Norfolk.

2. The Committee assert that we have no mercantile marine beyond a few miserable coasters, &c. In reply, we can only state what has been said over and over again, that upwards of 5,000 TONS of shipping, permanently registered tonnage, *are owned* in Wilmington, carrying from 100 to 350 tons, consisting of a fine new ship built on the spot, and brigs and schooners mostly of the first class. Nearly the whole of these are engaged in Foreign Trade, with the West Indies, Liverpool, Ports in the Mediterranean, and elsewhere. In the abstract of the Tonnage of the United States, for the year 1831, furnished to Congress by the Treasury Department, we find that the permanent and temporary registered and licensed tonnage of Norfolk was 11,894 38-100 tons, and that the same tonnage of Wilmington was 9,179 66-100 tons; showing a difference of only 2,714 72-100 tons, and that the permanent registered tonnage of Wilmington *exceeds* that of Norfolk by 60 tons. So much for the correctness of the extraordinary remark that we have no mercantile marine in North Carolina beyond a few miserable coasters!!

We are informed, by the Committee, that there is in this State, "*a total absence of Commerce.*" Such an assertion scarcely needs a refutation, but as it is our purpose to establish every assertion we make, by an appeal to facts, we again call your attention to an Address published in the 31st number of the People's Press, last August. It is there stated, and we pledge ourselves for the correctness of the statements, that the exports from the Port of Wilmington for one year, say 1832, were of Lumber, 18,000,000 ft, of Staves, 3,000,000 ft, of Timber, 17,000,000 ft, of Shingles, 50,000,000 ft, Naval Stores, 100,000 barrels, Cotton, 20,000 bales, Rice, 10,000 tierces, besides Rough Rice, Tobacco, Flax-Seed, Flour, Beeswax, Tallow, Cow-Peas, Beans, Peanuts, Tanned Leather, Cedar Bolts, Varnish, Pitch, Rosin, &c.—and all these are *minimum* calculations.

To this we add the following extracts from the books of the Custom-House:

Tonnage entered from Foreign countries;

	In American vessels.	*In Foreign vessels.*
4th quarter of 1832,	4,281 tons	1,835 tons
1st quarter of 1833,	6,066 tons	2,310 tons
Total entered fr. foreign countries,		14,482 tons

Tonnage cleared for foreign countries:

	In American vessels.	*In Foreign vessels.*
4th quarter of 1832,	6,306 tons	704 tons
1st quarter of 1833,	11,768 tons	3,188 tons
Total cleared for foreign countries,		21,966 tons

Besides the coasting trade, exceeding for the same two quarters, 50,000 tons, making the whole tonnage, foreign, American and coasting, in and out, 86,448 tons, in six months. Will the Committee again venture the assertion that in our State there is a total absence of commerce? But further, let us compare the trade of Wilmington with the trade of Norfolk, the port so highly extolled by the Committee, and for which all our own ports are to be sacrificed. In 1829 the foreign trade of Norfolk carried on in American and foreign vessels, in and out, was, according to the records of the Treasury Department, 30,570 tons. The same trade of Wilmington that year, carried on in the same way, amounted to 45,862 tons, EXCEEDING that of Norfolk by upwards of 15,000 tons. In 1833 the amount of the same trade in Norfolk was 54,010 tons, and in Wilmington 31,895 tons, showing an increase of the foreign trade of Norfolk, occasioned no doubt by the influence of the railroad, and a decrease of the foreign trade of Wilmington, owing to an increase of the coasting trade, yet still exceeding the foreign trade of Norfolk in 1829.

After this exposition of facts, how can we account for the reckless assertions of the Committee? Can they be ignorant on the subject? And if they accept this alternative, which for charity's sake we will grant, how can they justify themselves under the plea of ignorance, professing, as they profess, to enlighten the public, and enjoying ready access to every source of information? Truly, in spite of all their talents, and all their eloquence, and all their sophistry, on *one* horn of the dilemma they must remain suspended to the public view. Can they be ignorant of the address to the citizens of *Wake*, Johnson, Wayne, Sampson, Duplin, New-Hanover, and Brunswick, published in the People's Press on the 7th of August last, by the Committee of Correspondence of the town of Wilmington, and which was copied into other papers in the State? Did they never see the report of the Committee consisting of L. D. Henry, and others, of Fayetteville, published in the Observer last September, of which the following is the conclusion? "Again as a harbor, Wilmington possesses some eminent advantages. Vessels of 300 tons may load at her wharves, and proceed to New-York or Liverpool; her port affords the best assorted cargo for the West Indies and Europe of any of our southern ports—every denomination of bread stuffs, including rice; every denomination of naval stores, of the best quality; and every denomination of lumber, of the very best quality; in fact, there are but few articles of commerce that cannot there be had. This port has always, and will forever present peculiar advantages to the American coasting vessels, because it is a fresh water harbor, where the bottoms of vessels are exempt from the wonderful destruction occasioned by the salt water worm. This advantage is incalculable, for the greater amount of tonnage that enters a port, the greater competition for freights, and the less the price for transporting our produce abroad; besides the specie put in circulation for repairs, outfits, &c. and the employment to our ship mechanics." To this, we would add the remark, that Wilmington is the best market for West India produce, because the northern vessels which come out in the fall, after making one voyage to the West Indies, must return to the north without making the second voyage, unless the cargoes can be sold in Wilmington; and this course, which is usually preferred, causes coffee and sugar to be sold at the lowest rates.

Fellow-Citizens, can you come to any other conclusion, than that all this grievous misrepresentation and daring assertion are designed to prepare your minds for viewing, with complacency, the plan of a railway from the South Carolina line, directly across the state to Petersburg and Norfolk? The Committee did not so lightly esteem your patriotism as to suppose you would consent to go to Virginia, if you believed that you could enjoy as good trade in your native state. They well knew that you would not, unless impelled by stern necessity and insuperable obstacles, consent to make North Carolina tributary to Virginia, and place her, with all her resources, at the feet of her haughty rival. You surely cannot be misled by what follows in the address of the Committee. "If the first attempt be successful, the general plan may be gradually executed in the same cautious method, by successively completing such portions of the general plan, or of the particular works, as promise to be most profitable." Do you not perceive that a road from the South Carolina line across the state to Virginia, will be at once the grand receptacle of the trade of the interior, like the large venous trunks which collect the blood from all parts of the body and convey it to the heart? Every river, except the Catawba, every road from the interior, will reach it, and contribute to swell the current; and from the head of tide water too, on the other side, every thing will be swept away; and to cap the climax, the measure is so planned *that what will not go to Virginia in the East will become the spoil of South Carolina in the West.* And is there the most remote probability that after the lapse of the time necessary to accomplish and to test this work, whereby the course of trade thus concentrated will become firmly settled, and with the increase of influence that Virginia must gain, it will be possible to divert this mighty current in *any* direction for the benefit of North Carolina? The Committee themselves cannot think so; and they merely hold out this plan in prospective, to allay whatever anxiety and misgivings may yet linger in your hearts for the honor and welfare of North Carolina. But it may be asked, if the citizens can have a profitable trade and a good road to Virginia, and their welfare be thus secured, how can North Carolina be injured, and why not trade to Petersburg and Norfolk, as well as to Beaufort or Wilmington? Because, in the first place, Virginia would derive all the revenue from our trade which should go into the treasury of our own state. The merchants' tax in Wilmington alone is about $1000 per annum, and with a railroad from the interior might be increased to ten times that amount. Add to this the amount of the same tax in other ports of the state, and it is apparent that, with railroads from the interior to our seaboard, this tax would become a source of very considerable revenue. 2dly. Wherever a great market is established, *there* will be abundant capital, and where there is abundant capital, there will be life and energy, and activity, and improvement, in every thing; in the arts, and sciences, and in literature; there will be public libraries, and lyceums, and colleges, and asylums for the poor and the afflicted; there will be employment for mechanics and for laborers; and real estate will be advanced in value, and provisions and supplies of every kind will be more abundant and cheaper; in short, every thing that can add to the prosperity and the dignity of a free and enlightened people. Now is it not better that our citizens should enjoy all these benefits, than that they should be deprived of them for the advantage of the citizens of another state? 3dly. It will alienate the feelings of the citizens from their own state. Where a man trades, there is his interest; and where his interest lies, there is his heart. Have we not sufficient evidence of this? Is not this the very circumstance that has ever retarded the course, not only of internal, but of general improvement in this state? Too many of our citizens already trade to South Carolina and Virginia; and the consequences are, that they send representatives to the Assembly who feel no interest in the affairs of the state, and who vote against every measure that is proposed for the improvement and welfare of North Carolina. Besides this deep alienation of so many citizens from the interests of the state, there are local jealousies and diversities of interest, and conflicting claims and disunion, and disgraceful apathy and inaction; and industry is

crushed, and enterprise is paralyzed, and energy is subdued, and there is a constant draining of the population and resources of the state by emigration; in short, that lamentable condition of things, of which all are now aware, and which the Committee profess so sincerely to lament.

Will this alienation of feeling be denied, and will it be said that other causes have conspired to produce that policy in our state legislatures, of which we all deeply feel and lament the consequences? If so, we can appeal to the transactions of the last legislature, and adduce the most positive proof. When it was proposed to recharter the Cape-Fear Bank, and when the distress of the citizens was forcibly portrayed, and it was demonstrated that utter ruin would ensue if all the banks were closed at one time, and all the circulating medium withdrawn, and as strong a case of necessity was made out as ever was submitted to a legislative body, was there any thing like sympathy evinced by those who trade to Virginia? On the contrary, was it not opposed by those members, and did not one insultingly ask, what do the citizens of North Carolina want with banks? and unfeelingly remark to the House, that in *his* county there was no distress; they had plenty of money, they had brisk profitable trade, good roads, good markets, and Virginia bank-notes in abundance. Such expressions and such sentiments need no comment; they are death to the body politic, and ruin to the prosperity of any community. But 4thly, and above all, we would not trade to Virginia when we can trade, with equal profit, within the limits of our own State, because it would be derogatory to the honor and dignity of the state; *and the man who has not innate principle to feel this,* is not a fit subject for argument. We trust that we have now fully succeeded in proving what the Committee have thought proper to deny.

1. That there are, in the state of North Carolina, seaport towns and safe harbors, adequate to all the exigencies of commerce, and *one* at least equal for commercial purposes to any on the southern coast.

2. That the tonnage of one of these ports will bear a comparison, even under all its present disadvantages, with the tonnage of Norfolk.

3. That the commerce of the state is highly respectable, and might be made to equal that of our boasting neighbors, and

4. That it is not the interest of the people of this state to trade to South Carolina or Virginia, and that the policy recommended by the Committee, of first constructing a railroad across the state from Virginia to South Carolina, is injurious to the honor and real welfare of the state, and proclaims utter and irretrievable ruin to the whole seaboard.

It now remains to recommend that course which we conscientiously believe is demanded by the true interest and honor of the state. We are not the advocates of Wilmington, or of Fayetteville, or of Newbern, or of any other town, or any section of North Carolina. We plead for the whole and undivided state, and the general welfare, in the broadest signification of the term. We are in favor of any work that will convey the produce from any point within the limits of the State to any point on our own seaboard. But if there is any general plan to be adopted by the legislature, and to be preferred before others, we would advocate the construction of a railroad from the port of Beaufort through Newbern to the city of Raleigh, thence to Fayetteville and Hillsborough, or in any other direction that may be more favorable, so as to reach the remote west. Let such a work be executed, and North Carolina will be safe. Of its success, if ever accomplished, we cannot entertain the smallest doubt. That the resources of the state are adequate, we are fully assured. And after the completion of this work, we will cordially unite with the Committee in recommending the completion of the general plan, including even the transverse road, from South Carolina to Virginia, and all "such particular works as promise to be profitable." We ask you to give this subject the careful and impartial examination which its importance demands, and should you ultimately decide for that policy which we so truly deprecate, we shall retire from the contest with the proud consolation that we have been faithful to our state, and have discharged our duty to the best of our feeble ability.

WM. B. MEARES,
ALEX. McRAE,
JOSEPH A. HALL,
WM. P. HORT,
ROBT. H. COWAN,
P. K. DICKERSON,
JAS. S. GREEN,
EDW'D B. DUDLEY,
NICHOLAS N. NIXON,
Committee of Correspondence for the county of New-Hanover.

NOTE.—We do not wish to make any assertion without the proof, unless when what we assume is mere matter of opinion. We have neglected to do so in one instance. We have charged the Committee with having stated that North Carolina is destitute of natural advantages.

It is proved, 1. By their remarks on the sterility of the soil.

2. That both soil and climate are less favorable to the production of cotton, (which is represented to be the principle staple of the state,) than in the states situated to the southwest of us.

3. That there is a want of natural communications between the interior and the seaboard, causing an expense of transportation which the articles produced in the interior will not bear.

4. That we have neither seaports nor harbors; see pages 30 and 31.

BURDEN'S BOAT.—This boat left the foot of Courtland street at 22 minutes past 7 o'clock, on Monday morning. The *Erie*, which is considered the fastest sailer in the line, was then from 4 to 5 miles ahead. Mr. B. continued gaining on the Erie until he nearly reached Catskill, and in a very few minutes would have passed her, but for an accident that occurred to the machinery. The lever of the cut-off-steam valve gave way, and the consequence was a great waste of steam, and reduction of the revolutions of the wheel from 23 1-2 of a ten foot stroke to 16. Mr. B. finally stopped the boat, and with the assistance of Mr. Snodgrass, Civil Engineer of Glasgow, under whose direction the engine has been constructed, repaired it—but not so well as to enable Mr. B. to regain the speed he was previously going, viz. about 19 miles an hour.

The time lost in repairing it, and the difference of the speed in consequence of this accident, may be estimated at about three hours—still the boat reached Troy in less than an hour after the Erie. Had the machinery worked well, Mr. B. fully calculated to have made the passage in nine hours.

Mr. B. is about building another boat, 100 feet longer than his present one, the parabolic spindles of which are to be of iron.

Sea Sledge.—Mr. Buder, Counsellor of Mines at Munich, in Bavaria, some years ago invented what he termed an aquatic sledge, constructed on such a principle that it might be impelled and guided on the water by the rider himself, without any other aid.—The first public experiment was made with this machine on the 29th of August, before the royal family, at Nymphenburgh, with complete success. It is described as consisting of two hollow canoes or pontoons eight feet long, made of sheet copper, closed on all sides, joined to each other in a parallel direction at the distance of six feet by a light wooden frame. Thus joined, they support a seat resembling an arm chair, in which the rider is seated, and impels and steers the sledge by treading two large pedals before him; each of these pedals is connected with a paddle fixed perpendicularly in the interval between the two pontoons; in front of the seat stands a small table, on which he may read, write, draw or eat and drink. His hands being at perfect liberty he may even play an instrument, load and fire a gun, or do whatever he pleases. Behind the seat is a leathar bag, to hold any thing he may want in his excursion. It is evident that this machine must be admirably calculated for taking sketches of aquatic scenery, as also for the diversion of shooting water fowls, in which case the sportsman conceals himself behind a slight screen of branches or rushes so as to approach the birds unperceived. The vehicle is far safer than a common boat, the center of gravity being constantly in the middle of a very broad base; a circumstance which renders upsetting, even in the heaviest gale, absolutely impossible. It is moreover so constructed, that it may be taken to pieces in a few minutes, packed in a box, and put together in a very short time."—[Court Journal.]

Steam Carriages.—These wonderful macnines are now constructed with sufficient mechanical skill, amount of power, safety, and general efficiency, to ensure their successful employment on any good road; and it is certainly time for our capitalists to turn their attention to them as legitimate objects of support, and as offering the means of a profitable investment. From the earliest development of the capabilities of steam, as applicable to purposes of locomotion, on properly constructed roads, we have carefully watched the progress made by different inventors, and have on many occasions borne testimony to the unceasing efforts of two of the most persevering and deserving among them; of two who have from time to time, promised less and performed more than any of their contemporaries—we mean Col. Maceroni and Mr. Hancock. On Saturday we had a trip on the Edgeware road, with the second coach constructed by the gallant Colonel. Starting from the Paddington wharf, No. 19, we proceeded on the road in the most surprising style, the coach turned, checked, stopped, or having its speed increased, under the complete command of the conductor. About three miles out we passed a stage-coach, whose four horses were put to their utmost speed, with a comparative velocity to that with which the stage-coach would have passed a wagon, our rate being at that time about 18 miles an hour. Soon after this we ascended Windmill-hill with perfect ease; although, in consequence of the road undergoing repair, the part we had to ascend was cut into deep ruts, and covered with dry soil and dust from three to six inches deep; forming, perhaps, the most uncertain and disadvantageous fulcrum on which the wheel of a steam-carriage could ever have to act. We arrived at the Welch Harp Inn, which is several perches over the five miles from our starting place, and turned the coach in the direction of Paddington, in precisely twenty minutes; having performed the distance, inclusive of stopping at the turnpike, and on two other occasions, and despite the bad condition of Windmill-hill, at the extraordinary average rate of upwards of fifteen miles an hour. Our return occupied the same period of time; and after this completion of the trip, we made the round of Paddington-green to gratify some gentlemen who had not arrived in time to witness the more extensive trial. Among our fellow-passengers on these occasions, were Jerome Buonaparte, ex-King of Westphalia, Prince Jerome, his son, the Duke de Montfort, the Marquis Azolino, M. Vigne de Marveille, and other distinguished foreigners.—[Morning News.]

Steam Carriages.—Mr. Hancock's "Autopey" was seen, on Saturday last, in Cheapside, wending its way with the greatest adroitness amidst the multitude of carriages with which that thoroughfare is crowded. A stronger proof of its manageableness could not possibly have been afforded. We understand that it was on its way from Stratford to its old quarters in the City-road, preparatory to its being again started to run for hire, in conjunction with two or three other carriages, between the City and Paddington. Mr. Squires has, we are informed, sold out, and left Colonel Macerone sole proprietor of the steam carriage prodigy, which did the 1,700 miles without requiring a shilling for repairs, &c. &c. A new steam-carriage has just entered the field, constructed by Mr. Redmund, who, some time ago, advertised that he was willing to furnish locomotives to run on common roads at any required speed, although he had never tried the experiment! The public will now, therefore, soon be enabled to judge whether he was justified or no in his extraordinary confidence. As yet the carriage has only been on a few private trips, which are said to have been quite

satisfactory. Publicity, is, however, the only test in such matters.—[Mechanics Magazine.]

Bridgeport, Conn, July 9.—The extreme heat of the weather has in some measure broken up the regular chain of communication. Three horses out of four attached to a stage, were driven so hard in order to be in time for the steamboat, that they fell and died almost immediately. It is agreed by all, that such intense heat has not been felt for many years.

[From Crichton's History of Arabia.]

THE ARTS.—"Their mathematical and mechanical knowledge the Arabs turn to various purposes of multiplying and improving the conveniences of life—such as the construction of aqueducts, baths, cisterns, and canals. Their acquaintance with hydraulics is manifested from the number of mills and other water-works employed in the useful process of irrigation. Accustomed to an arid and sultry climate, they considered the command of water to be a material requisite in every country where they settled. The *pontanos* or reservoirs in Spain, and the tanks in Africa, were either erected or restored by them. Their palaces and mosques were furnished with capacious cisterns. The gardens of the Alhambra contained sheets of water, in the surface of which the buildings were reflected; and in most of the principal cities fountains played in the streets as well as in the courts of the houses, by which the atmosphere was attempered during summer. In the famous palace of Toledo was a pond, in the midst of which rose a vaulted room of stained glass adorned with gold. In this apartment the caliph could enter untouched by the water, and sit while a cascade poured from above, with tapers burning before him. We are not aware that any discoveries of theirs in hydrostatics have been transmitted to us; but the titles of two works by the celebrated Alkendi are mentioned in Casiri, namely, on Bodies that Float on Water, and on Bodies that Sink.

"Architecture was an art in which the Arabs particularly excelled; and the revenues of kingdoms were expended in erecting public buildings, of which Jerusalem, Babylon, and Baalbec, afforded the most stupendous models. It has been observed as a circumstance worthy of remark, that no people ever constructed so many edifices as the Arabs, who extracted fewer materials from the quarry. From the Tigris to the Orontes, from the Nile to the Guadalquiver, the buildings of the first settlers were raised from the wreck of cities, castles, and fortresses, which they had destroyed.

"In the style of architecture, the Arabs, both of the east and the west, had a kindred resemblance, as appears by contrasting the disposition of the apartments of the Alhambra, and other remains of Moorish art, with the accounts given by travellers relative to the general mode of oriental buildings. While little attention comparatively was bestowed on the exterior of their mansions, on the furniture and accommodation within every thing was lavished that could promote luxurious ease and personal comfort. Their rooms were so contrived that no reverberation of sound was heard. The light was generally admitted in such a manner as, by excluding external prospects, to confine the admiration of the spectator chiefly to the ornaments and beauties of the interior. Their arrangements for ventilation were admirable; and by means of caleducts, or tubes of baked earth, warm air was admitted so as to preserve a uniform temperature. The utmost labor and skill were expended in embellishing the walls and ceilings. Their tiles had a blue glazing over them; their paving bricks were made of different colors—blue, white, black, or yellow—which, when properly contrasted, had a very agreeable effect. Nothing is more astonishing than the durability of the Moorish edifices. The stucco composition on their walls became hard as stone; and even in the present century, specimens are found without a crack or a flaw on their whole surface. Their wood-work also, which is of a more fragile nature, still remains in a state of wonderful preservation. The floors and ceilings of the Alhambra have withstood the neglect and dilapidation of nearly 700 years; the pine wood continues perfectly sound, without exhibiting the slightest mark of dry-rot, worm, or insect. The coat of white paint retains its color so bright and rich, that it may be mistaken for mother of pearl."

"It is unquestionable that a great number of the inventions which at the present day add to the comforts of life, and without which literature and the arts could never have flourished, are due to the Arabs. They taught us the use of the pendulum in the measurement of time; and also of the telegraph, though not with all the speed and effect of modern improvement. The manufacture of silk and cotton was brought by them into Spain, as was probably the art of dying black with indigo. They introduced the use of camels and carrier pigeons into Sicily. The art of enamelling steel, the system of a national police, the principles of taxation, and the benefits of public libraries, were all derived from the same source. Rhyme, a pleasing characteristic of modern verse, though some have assigned to it a Gothic origin, was doubtless borrowed from the Saracens by the troubadours and Provençal bards, who derived from the same source the sentiment of honor, the mysticism of love, and the spirit of chivalry, so copiously infused into our early romances. Even Descartes, as Huet has asserted, was indebted to them for his celebrated metaphysical principle, *Cogito, ergo sum.* To them also belongs the honor of making us acquainted with the manufacture and use of paper. This invaluable commodity, it is true, had from a very remote period been made in China from the refuse of silk, bamboo, and other substances. About the year 649 the invention was introduced at Samarcand by the Tartars, who used cotton instead of silk; and when that flourishing city was subdued by the Moslems, the process was conveyed to Mecca, by Yussuf Amru (A. D. 706), where paper was made similar to that now manufactured, though it does not appear to have come immediately into general use. From Mecca the art spread through all the Arabian dominions. In Spain, which was renowned for this article from the 12th century downwards, flax, which grew there abundantly, was substituted for cotton, the latter being scarce and dear. Alphonso X. established paper-mills, and his example passed successively into France, Germany, and England.

"Gunpowder, the discovery of which is generally attributed to Schwartz, a German chemist, was known to the Arabs at least a century before any traces of it appear in European history. Though it is probable they may have derived their knowledge of this composition from the Indians, they certainly improved its preparation, and found out different ways of employing it in war. The mariner's compass has been alternately given to the Italians and the French; but Tiraboschi, notwithstanding his partiality for his country, is decidedly of opinion that the honor of its invention is due to the Arabs. Its adoption in Europe is not older than the 13th century, while among the Arabs it was known in the eleventh. The polarity of the magnet is alleged to have been known to Aristotle; and something like the compass was in use among the Chinese; but as the Saracens paid considerable attention to navigation, and often undertook long and laborious voyages, history has with much probability assigned to them the discovery of the magnetic needle."

At Muscat, near the entrance of the Persian Gulf, "the water is good; the fruit of the best quality,—grapes, mangoes, peaches, plantains, figs, pomegranates, limes, melons, and dates. Nowhere is there greater variety of fish; in the bay they swarm like gnats in a summer evening; the rocks supply oysters and other shell-fish, all of which are sold at a very cheap rate. As the pasturage is scanty in this neighborhood, dried fish a little salted, and pounded date stones, form the chief articles of food for their cattle, of which they are very fond. Horses and sheep, as well as cows, are fed on this diet.

"Lands are commonly let on lease, or for an annual rent, usually payable in produce. Slaves are here, as in all other parts of Arabia, employed in agricultural labor; but they are treated with uniform kindness and indulgence. Oman is by no means celebrated for its manufactures. Turbans and waistbands, or girdles of cotton and silk, striped or checked with blue; cloaks, cotton, canvas, gunpowder, and arms of inferior quality; earthen jars, called *murtuban*, for the Zanguebar market,—comprise almost all their fabrics. They also prepare an esteemed sweetmeat, named *hulwah*, from honey or sugar, with the gluten of wheat, and ghee, and a few almonds.

"The price of live stock at Muscat is extremely various. Camels, according to their blood and quality, will bring from thirty to three hundred dollars apiece; goats from four to six; sheep from one and a half to six; mules are not reared, neither are horses abundant; but the asses of Oman are celebrated as the finest in Arabia. The price of the common kind varies from one to forty dollars; but the best breeds sell for very extravagant sums."

FOOD.—"The hardy and athletic frame of the Bedouins, or inhabitants of the desert, is to be ascribed in part to their abstemious habits. They are models of sobriety, and never indulge in luxuries, except on some festive occasion, or on the arrival of a stranger. Their usual articles of food are rice, pulse, dates, milk, butter, and flour. The common people eat bread made of dhourra, which is coarse and insipid. When they have no grid-iron, they roll the dough into balls and cook it among embers. They generally eat their bread while hot and only half baked."

The Fatal Escape.—We have seldom had to record a case of more melancholy, and indeed romantic, domestic affliction than one which has lately occurred in the Isle of Man. A Miss Fell, a beautiful young lady, resident on that island, walked out to amuse herself on the cliffs near Douglass Head, from one of which she fell, and was precipitated upon a shelving rock at a considerable distance below. She was much bruised by the fall; the sea almost surrounded her, and the part on which it was bounded by the land was so precipitous, that escape was impossible. Here she remained for thirteen days and nights. Her voice became exhausted by her repeated attempts to render herself audible. A small well of spring water, which she fortunately found upon the cliff, afforded her only nourishment. On the fourteenth day, however, the waving of her handkerchief attracted the notice of a boatman, who rowed towards her, and found her almost insensible, on her knees, her hands clasped in the attitude of prayer, and her voice scarcely strong enough to disclose her residence. She was carried home, where she found her wretched mother worn out by her brother's illness and her own absence, and was only just in time to receive her dying breath. The wretched young lady, agonized and exhausted, terminated her own existence in a fit of insanity.—[London Paper.]

COMFORTS OF HUMAN LIFE.—The following picture is not overcharged, and might be much extended. Nearly each individual of the civilized millions that cover the earth may have the same enjoyments as if he were the sole lord of all. "A single man of small fortune may cast his looks around him, and say, with truth and exultation, I am lodged in a house that affords me conveniences and comforts, which even a king could not command some centuries ago. Ships are crossing the seas in every direction, to bring me what is useful from all parts of the earth. In China, men are gathering the tea leaf for me; in America, they are planting cotton for me; in the West Indies, they are preparing my sugar and my coffee; in Italy, they are breeding silk-worms for me; in Saxony, they are shearing the sheep to make me clothing; in England, powerful steam-engines are spinning and weaving for me, and making cutlery for me, and pumping the mines, that minerals useful to me may be produced. I have post-coaches running day and night, on all the roads, to carry my correspondence; I have roads and canals, and bridges, to bear the fuel for my winter fire. Then I have editors and printers, who daily send what is going on throughout the world, among all these people who serve me; and in a corner of my house I have books, the miracle of all my possessions, more wonderful than the wishing cap of the Arabian tales; for they transport me instantly, not only to all places, but to all times. By my books I can conjure up before me, in vivid existence, all the great and good men of antiquity; and for my individual satisfaction. I can make them act over again the most renowned of their exploits: the orators declaim for me: the historians recite: the poets sing: and from the equator to the pole, or from the beginning of time until now, by my books I can be where I please."—[Dr. Arnott.]

MEMOIR OF LAFAYETTE.

[*From the Encyclopedia Americana.*]

Lafayette, Gilbert Motier, (formerly Marquis de,) was born at Chavagnac, near Brioude, in Auvergne, September 6, 1757, was educated in the college of Louis le Grand, in Paris, placed at court, as an officer in one of the guards of honor, and, at the age of 17, was married to the grand-daughter of the duke of Noailles. It was under these circumstances that the young Marquis de Lafayette entered upon a career so little to be expected of a youth of vast fortune, of high rank, of powerful connections, at the most brilliant and fascinating court in the world. He left France secretly for America, in 1777, and arrived at Charleston, South Carolina, April 25, being then 19 years old. The state of this country, it is well known, was, at that time, most gloomy; a feeble army, without clothing or arms, was with difficulty kept together before a victorious enemy; the government was without resources or credit, and the American agents in Paris were actually obliged to confess that they could not furnish the young nobleman with a conveyance. "Then," said he, "I will fit out a vessel myself;" and he did so. The sensation produced in this country, by his arrival, was very great; it encouraged the almost disheartened people to hope for succor and sympathy from one of the most powerful nations in Europe. Immediately on his arrival, Lafayette received the offer of a command in the continental army, but declined it, raised and equipped a body of men at his own expense, and then entered the service as a volunteer, without pay. He lived in the family of the commander-in-chief, and won his full affection and confidence. He was appointed major-general in July, and in September was wounded at Brandywine. He was employed in Pennsylvania and Rhode Island in 1778, and, after receiving the thanks of the country for his important services, embarked at Boston, in January, 1779, for France, where it was thought he could assist the cause more effectually for a time. The treaty concluded between France and America, about the same period, was, by his personal exertions, made effective in our favor, and he returned to America with the intelligence that a French force would soon be sent to this country. Immediately on his arrival, he entered the service, and received the command of a body of infantry of about 2,000 men, which he clothed and equipped, in part, at his own expense. His forced march to Virginia, in December, 1780, raising 2,000 guineas at Baltimore, on his own credit, to supply the wants of the troops; his rescue of Richmond; his long trial of generalship with Cornwallis, who boasted that "the boy could not escape him;" the siege of Yorktown, and the storming of the redoubt, are proofs of his devotion to the cause of American independence. Desirous of serving that cause at home, he again returned to France for that purpose.

Congress, which had already acknowledged his merits on former occasions, now passed new resolutions, (November 23, 1781,) in which, besides the usual marks of approbation, they desired the American ministers to confer with him in their negociations. In France, a brilliant reputation had preceded him, and he was received with the highest marks of public admiration. Still he urged upon his government the necessity of negociating with a powerful force in America, and succeeded in obtaining orders to that effect. On his arrival at Cadiz, he found 49 ships, with 20,000 men, ready to follow him to America, had not peace rendered it unnecessary. A letter from him communicated the first intelligence of that event to Congress. The importance of his services in France may be seen by consulting his letters in the correspondence of the American Revolution, (Boston, 1831.) He received pressing invitations, however, to revisit the country. Washington, in particular, urged it strongly; and, for the third time, Lafayette landed in the United States, August 4, 1784. After passing a few days at Mount Vernon, he visited Baltimore, Philadelphia, New-York, Boston, &c., and was every-where received with the greatest enthusiasm and delight. Previous to his return to France, Congress appointed a deputation, consisting of one member from each state, "to take leave of him on behalf of the country, and assure him that the United States regard him with particular affection, and will not cease to feel an interest in whatever may concern his honor and prosperity." After his return he was engaged in endeavoring to mitigate the condition of the Protestants in France, and to effect the abolition of slavery. In the Assembly of the Notables, in 1787, he proposed the suppression of *lettres de cachet*, and of the state prisons, the emancipation of the Protestants, and the convocation of the representatives of the nation. When asked by the Count D'Artois, since Charles X., if he demanded the states-general—"Yes," was his reply, "and something better." Being elected a member of the states-general, which took the name of *national assembly*, (1789,) he proposed a declaration of rights, and the decree providing for the responsibility of the officers of the crown. Two days after the attack on the Bastile, he was appointed, (July 15,) commander-in-chief of the national guards of Paris. The court and national assembly were still at Versailles, and the population of Paris, irritated at this, had already adopted, in signs of opposition, a blue and red cockade, (being the colors of the city of Paris.) July 26, Lafayette added to this cockade the white of the royal arms, declaring at the same time that the tri-color should go round the world. On the march of the populace to Versailles, (October 5 and 6,) the national guards claimed to be led thither. Lafayette refused to comply with their demand, until, having received colors in the afternoon, he set off, and arrived at 10 o'clock, after having been on horseback from before daylight. He requested that the interior of the *chateau* might be committed to him; but this request was refused, and the outer posts only were entrusted to the national guards. This was the night on which the assassins murdered two of the queen's guards, and were proceeding to further acts of violence, when Lafayette, at the head of the national troops, put an end to the disorder, and saved the lives of the royal family. In the morning he accompanied them to Paris.

On the establishment of the Jacobin club at Paris, he organized, with Bailly, then Mayor of Paris, the opposing club of Feuillians. January 20, 1790, he supported the motion for the abolition of titles of nobility, from which period he renounced his own, and has never since resumed it. The constitution of a representative monarch, which was the object of his wishes, was now proposed, and July 13, 1790, was appointed for its acceptance by the king and the nation, and in the name of 4,000,000 national guards, Lafayette swore fidelity to the constitution. Declining the dangerous power of constable of France, or generalissimo of the national guards of the kingdom, after having organized the national militia, and defended the king from popular violence, he retired to his estates. The first coalition against France, (1792,) soon called him from his retirement. Being appointed one of three major-generals in the command of the French armies, he established discipline, and defeated the enemy at Phillipville, Maubeuge, and Florennes, when his career of success was interrupted by the domestic factions of his country. Lafayette openly denounced the terrible Jacobins, in his letter of June 19, in which he declared that the enemies of the revolution, under the mask of popular leaders, were endeavoring to stifle liberty under the excesses of licentiousness. June 20, he appeared at the bar of the assembly, to vindicate his conduct, and demand the punishment of the guilty authors of the violence. But the mountain had already overthrown the constitution, and nothing could be effected. Lafayette then offered to conduct the king and his family to Compiegne. This proffer being declined, he returned to the army, which

he endeavored to rally round the constitution. June 30, he was burnt in effigy at the Palais Royal; and August 5, was accused of treason before the assembly. Still he declared himself openly against the proceedings of August 10; but, finding himself unsupported by his soldiers, he determined to leave the country, and take refuge in some neutral ground. Some persons have charged General Lafayette with a want of firmness at this period, but it is without a full understanding of the situation of things. Conscious that a price was set on his head at home, knowing that his troops would not support him against the principles which were triumphing in the clubs and the assembly, and sensible that, even if he were able to protract the contest with the victorious faction, the frontiers would be exposed to the invasion of the emigrants and their foreign allies, with whom he would have felt it treason against the nation to have negociated, he had no alternative. Having been captured by an Austrian patrol, he was delivered to the Prussians, by whom he was again transferred to Austria. He was carried, with great secrecy, to Olmutz, where he was subjected to every privation and suffering, and cut off from all communication with his friends, who were not even able to discover the place of his confinement until late in 1794.

An unsuccessful attempt was made to deliver him from prison by Dr. Bollman, a German, and Mr. Huger, (now Colonel Huger, of Charleston, S. C.) His wife and daughters, however, succeeded in obtaining admission to him, and remained with him nearly two years, till his release. Washington had written directly to the Emperor of Austria on his behalf, without effect; but after the memorable campaign of Bonaparte in Italy, the French government required that the prisoners at Olmutz should be released, which was done August 25, 1797, after a negociation that lasted three months. Refusing to take any part in the revolutions of the 18th Fructidor, or of the 18th Brumaire, he returned to his estate at La Grange, and, declining the dignity of senator, offered him by Bonaparte, he gave his vote against the consulate for life, and, taking no further part in public affairs, devoted himself to agricultural pursuits. On the restoration of the Bourbons, in 1814, he perceived that their principles of government were not such as France required, and he did not therefore leave his retirement. The 20th March, 1815, again saw Napoleon on the imperial throne, and endeavoring to conciliate the nation by the profession of liberal principles. Lafayettee refused, though urged though the mediation of Joseph, to see him, protested against the *acte additionnel* of April 22, declining the peerage offered him by the Emperor, but accepted the place of representative, to which the votes of his fellow-citizens called him. He first met Napoleon at the opening of the chambers: the Emperor received him with great marks of kindness, to which, however, he did not respond; but, although he would take no part in the projects of Napoleon, he gave his vote for all necessary supplies, on the ground that France was invaded, and that it was the duty of all Frenchmen to defend their country. June 21, Napoleon returned from Waterloo, and it was understood that it was determined to dissolve the house of representatives, and establish a dictatorship. Two of his counsellors informed Lafayette that, in two hours, the representative body would cease to exist. Immediately on the opening of the session, he ascended the tribune, and addressed the house as follows: "When, for the first time, after an interval of many years, I raise a voice which all the old friends of liberty will recognise, it is to speak of the danger of the country, which you only can save. This, then, is the moment for us to rally round the old tricolored standard, the standard of '89, of liberty, of equality of public order, which we have now to defend against foreign violence and usurpation." He then moved that the house declare itself in permanent session, and all attempts to dissolve it high treason; that whoever should make such an attempt should be considered a traitor to the country, &c. In the evening, Napoleon sent Lucien to the house, to make one more effort in his favor. Lucien, in a strain of impassioned eloquence, conjured the house not to compromise the honor of the French nation by inconstancy to the Emperor. At these words, Lafayette rose in his place, and addressing himself directly to the orator, exclaimed, "Who dares accuse the French nation of inconstancy to the Emperor? Through the sands of Egypt and the wastes of Russia, over fifty fields of battle, this nation has followed him devotedly, and it is for this that we now mourn the blood of three millions of Frenchmen." This appeal had such an effect on the assembly, that Lucien resumed his seat without finishing his discourse. A deputation of five members from each house was then appointed to deliberate in committee with the council of ministers. Of this deputation, General Lafayette was a member, and he moved that a committee should be sent to the Emperor to demand his abdication. The arch-chancellor refused to put the motion; but the Emperor sent in his abdication the next morning, (June 22.)

A provincial government was formed, and Lafayette was sent to demand a suspension of hostilities of the armies, which was refused. On his return, he found Paris in possession of the enemy; and, a few days after, (July 8,) the doors of the representatives' chamber was closed, and guarded by Prussian troops. Lafayette conducted a number of the members to the house of Lanjuinais, the president, where they drew up a protest against this act of violence, and quietly separated. Lafayette now retired once more to La Grange, where he remained to 1818, when he was chosen member of the Chamber of Deputies. Here he continued to support his constitutional principles, by opposing the laws of exceptions, the establishment of the censorship of the press, the suspension of personal liberty, &c., and by advocating the cause of public instruction, the organization of a national militia, and the inviolability of the charter. In June, 1824, he landed at New-York, on a visit to the United States, upon the invitation of the President, and was received in every part of the country with the warmest expressions of delight and enthusiasm. He was proclaimed, by the popular voice, "the guest of the nation," and his presence every where was the signal for festivals and rejoicings. He passed through the twenty-four states of the Union in a sort of triumphal procession, in which all parties joined to forget their dissensions, in which the veterans of the war renewed their youth, and the young were carried back to the doings and sufferings of their fathers. Having celebrated, at Bunker Hill, the anniversary of the first conflict of the revolution, and, at Yorktown, that of its closing scene, in which he himself had borne so conspicuous a part, and taken leave of the four ex-Presidents of the United States, he received the farewell of the President, in the name of the nation, and sailed from the capital in a frigate, named, in compliment to him, the Brandywine, September 7, 1825, and arrived at Havre, where the citizens, having peaceably assembled to make some demonstrations of their respect for his character, were dispersed by the *gend'armerie*. In December following, the Congress of the United States made him a grant of $200,000, and a township of land, "in consideration of his important services and expenditures during the American revolution." The grant of money was in the shape of stock, bearing interest at six per cent., and redeemable December 31, 1834. In August, 1827, he attended the obsequies of Manuel, over whose body he pronounced a eulogy. In November, 1827, the Chamber of Deputies was dissolved. Lafayette was again returned a member by the new elections. Shortly before the revolution of 1830, he travelled to Lyons, &c., and was enthusiastically received—a striking contrast to the conduct of the ministers towards him, and an alarming symptom to the despotic government. During the revolution of July, 1830, he was appointed general-in-chief of the national guards of Paris, and though not personally engaged in the fight, his activity and name were of the greatest service.

To the Americans, Lafayette, the intimate friend of Washington, had appeared in his last visit almost like a great historical character returning from beyond the grave. In the eyes of the French, he is a man of the early days of their revolution—a man, moreover, who has never changed side or principle. His undeviating consistency is acknowledged by all, even by those who did not allow him the possession of first-rate talents. When the national guards were established throughout France, after the termination of the struggle, he was appointed their commander-in-chief, and his activity in this post was admirable. August 17, he was made marshal of France. His influence with the government seems to have been, for some time, great; but whether his principles were too decidedly republican to please the new authorities, (a few days after the adoption of the new charter, he declared himself a pupil of the American school,) or whether he was considered as the rallying point of the republican party, or whatever may have been the reason, he sent his resignation in December, 1830, which was accepted, and Count Lobau appointed chief of the national guards of Paris. Lafayette declared from the tribune, that he had acted thus in consequence of the distrust which the power accompanying his situation seemed to excite in some people. On the same occasion he also expressed his disapprobation of the new law of election. Shortly before his resignation, he exerted himself most praise-worthily to maintain order during the trial of the ex-ministers. The Poles lately made him first grenadier of the Polish national guards. We are unable to state what were Lafayette's views respecting the best government for France in its present condition, though undoubtedly, in its abstract, he preferred a republic.

AGRICULTURE, &c.

HARVESTING.—It is asserted, as a general rule, that the proper time to reap wheat, or rye, is when the straw begins to shrink and become white about half an inch below the ear. This appearance is a sure indication that the grain has ceased to receive nourishment from the roots of the plant; and by cutting early, provided it is not taken to the barn or stack too green, the following advantages will be gained: First, the grain will make more and whiter flour. 2d. There will be less wasted by the grain's shelling. 3d. By commencing harvest early, you will have a fairer prospect of finishing before the last cuttings become too ripe, so that much of the grain will shell out in reaping and securing the crop. 4th. If you cut your grain as soon as it will answer, your straw and chaff will contain much more nourishment than if it were bleached and made brittle by the sun, air, dew, and rain, all of which combine to deprive it of most of its value for fodder. 5th. Should you plough in your stubble immediately after harvest, or mow it and secure it for fodder or litter, (either of which modes of management is perfectly consonant with the rules of good husbandry,) the stubble will make much better food for your cattle, or manure for your ground, than if it had yielded all its sweets, and much of its substance, to the greedy elements above mentioned.

If your wheat or rye is much affected by blight or rust, it should be cut even while still in the milk, and afterwards exposed to the sun and air, till the straw is sufficiently dry, and the grain so much hardened, that it will answer to deposit in the barn or stack. The heads, in such cases, should be so placed by the reapers as not to touch the ground. This may be done by laying the top ends of each handful on the lower end of the preceding one.

If your grain is encumbered with grass or weeds, you must cut it pretty near the top, in order to avoid as much as possible those extraneous substances. It will also be necessary to reap somewhat earlier than might be otherwise expedient, that you may have time to dry the weeds without danger of the grain's shelling out. If your grain is very ripe when you harvest it, the bands should be made early in the morning while the straw is moist and pliable. And Dr. Deane recommended, in such cases, to bind the sheaves when the air begins to be damp towards evening, as the least degree of moisture will toughen the straw.

It has been recommended by several English writers to bind the wheat as well as rye with only one length of the straw. If the straw is pretty long, and not very thoroughly dry, this may be good economy. You save the trouble of making bands; your wheat will dry better in the sheaf, (as the sheaves must of course be small,) and though it may take some more time and trouble to pitch and handle it, we believe the advantages, in many cases, will turn the scale in favor of binding wheat with single lengths of straw.

In stowing wheat or rye, some persons deposit the sheaves on a mow of hay; but this is a bad plan, as the grain presses the hay so that it is apt to become musty, and communicate a musty or mouldy taint to the super-incumbent grain; which will be harder to thresh, than if it had a more dry and airy location. It may be placed on a scaffold of rails, laid on the beams, and over the floor of a barn; though it is not so easy to procure it for threshing, as if it were left on a scaffold of less elevation. But this disadvantage may be more than compensated by its being in a situation favorable for drying. If there is a deficiency of barn room, the sheaves may be stored in stacks. In that case, 'care should be taken that the grain may not draw moisture from the ground, by laying boards, straw, or rubbish, under the stack. A better way still is to have a tight floor of boards, mounted on four blocks set in the ground, and so high from the ground as to prevent the entering of vermin.

'In building a stack, care should be taken to keep the seed-ends of the sheaves in the middle, and a little higher than the outer ends. No fowls can then come at the grain; and the rain that falls on the outer ends will run off, and not pass towards the centre. The stack should be well topped with straw, that the rain may be completely turned off.'

Oats.—It is advised to harvest oats before the straw has wholly turned yellow. The straw will be of little value, if permitted to stand till it becomes white and destitute of sap. Though oats should be well dried on the ground after cutting, they should not be raked or handled when in the driest state. They should be gathered mornings and evenings, when the straw is made limber and pliable by the moisture of the air. If they are housed while a little damp, there will be no danger if they have been previously thoroughly dried.

Barley.—We are told by the wise men of agriculture, that some of the rules which should be observed in harvesting wheat, rye, nd oats, will not apply to barley. Willich's Domestic Encyclopedia states, that 'with respect to the time when barley is fit to be mowed, farmers frequently fall into the error of cutting it before it is perfectly ripe; thinking it will attain to perfect maturity if it lie in the swath. This, however, is a very common error, as it will shrivel in the field, and afterwards make but an indifferent malt; it also threshes with more difficulty, and is apt to be bruised under the flail. The only certain test of judging when it is fit to mow, must be from the dropping and falling of the ears, so as to double against the straw. In that state, and not before, it may be cut with all expedition, and carried in without danger to the mow.'

Dr. Dean's New-England Farmer states, that 'Some have got an opinion that barley should be harvested before it is quite ripe. Though the flour may be a little whiter, the grain shinks so much that the crop seems greatly diminished and wasted by early cutting. No grain, I think, requires more ripening than this; and it is not apt to scatter out when it is very ripe. It should be threshed soon after harvesting; and much beating, after it is cleared from the straw, is necessary in order to get off the beards. Let it lie a night or two in the dew, after it is cut, and the beards will come off the more easily.—[N. E. Farmer.]

Cultivation of Hops. By LATHAM. [For the New-York Farmer and American Gardener's Magazine.]

In endeavoring to comply with your wish, to give you the detail of a well cultivated Hop ground, I have done so as briefly as possible. Having found a soil, a friable loam or clay, suitable, as also a site well protected from the northerly winds, and determined on the number of acres to be cultivated, we proceeded to enrich and get the ground into a good state, not sparing the manure of well decomposed horse dung, or, if practicable, sheep, fed off with turnips as a preparatory crop; at any rate, the land must be free from root weeds. In England, vegetation not being so luxuriant, closer planting would be used; but in this country, about 12 feet by 12 will be a good distance.

We will suppose the ground marked out, and holes dug ready for the reception of the sets or cuttings. Lay the lower spit of earth aside, and reverse the upper to be a richer receptacle for the sets; insert three, and cover with the lower spit; if the top soil is as it should be, application of manure is not now necessary. Let the hole be about 18 inches over, and 18 inches deep; mark each set with a small stick.

In the second week in March, if open weather, the shoots will appear; now dig over all the ground, and in a week or two put to each hill a small stake, 4 or 5 feet high: see that the vine readily takes to the pole. Although few or no hops can be expected the first season, yet the plants acquire much strength from climbing the poles. I should have observed, that in the previous autumn the sets should have been placed in the ground, although many prefer the spring planting. When the vine has become withered, the poles may be taken away; this, with always keeping under the weeds, will be all that is necessary the first season. There will be ample room to take an intermediate crop the first season, such as a line of potatoes, turnips, &c. &c.

As soon as the shoots appear in March, the second year, begin to dig all around, and uncover the hills, laying bare the shoots, so that all the vine, with an inch of the crown of the plant, may be cleanly cut off from the hill: a shoemaker's knife, very sharp, is the best tool. The proper shoots will soon appear. Early in April, to each hill put two poles, of about ten or twelve feet high; the third season they will require three poles of fourteen or fifteen feet, and four for all after seasons. Now, to each pole, in May, or when the vine is advanced about eighteen inches in length, select three well grown and clean topped shoots, to tie to the poles, with rushes procured the year previous, and carefully dried. At intervals, the vines must be attended to in climbing the poles. Manure should be added around each hill, and well forked in, though the best season for the application of manures is previous to the spring, or first digging, when it is best incorporated. Variety of manures may be applied with much effect, as old woollen rags cut up, fish, night soil, and, now and then, lime, as a ready means of adapting other manures to be absorbed by the feeding vessels of the plants. At one season, all around the plant will be found a multitude of small fibres put forth in search of food.

The time of picking the hops from the poles will be about the beginning of September; and the period is known by the seed being surrounded by a fine yellow dust, and feeling clammy on pressure; also, the seed itself is purple, the whole capsule is crisp to the feel, and a small leaf, called the lamb's tongue, appears. The future preservative

quality of the hop depends much on the drying. Nothing but practice and great care can perfect that operation; an empyreumatic flavor will be acquired by too much heat, or must and mould by imperfect drying, either deteriorating the value in a great degree. LATHAM.

ENGLISH TURNIPS.—Every farmer will find it profitable to raise a quantity of these roots. The Mangel Wurtzel and the Ruta Baga, useful as they undoubtedly are, will not completely supersede, nor altogether supply the place of the old fashioned English turnip. In the Memoirs of the Board of Agriculture of the State of New-York, vol. i, page 26, we find the following remarks on the best mode of cultivating this valuable root.

'There is no difficulty in raising turnips on new land; but it is very desirable to know the best mode of raising them, at least a small patch every year, on old farms. Mr. Henry De Bois, of this county, [Rensselaer,] and Maj. E. Cady, of Columbia county, say, that they have succeeded in obtaining good crops several years in succession by the following process. Turn over a turf of old sward the first week in June. Yard your cattle at night on this, in the proportion of six head at least to a quarter of an acre, until the 20th of July. Then harrow lengthwise the furrows, so as not to disturb or overturn them, and sow in the proportion of about half a pound of seed per acre.

'If it is not convenient to yard cattle upon it sufficiently, about two inches of well rotted manure harrowed in as above, will do as a substitute. Mr. C. R. Colden applies the manure by strewing it in shallow furrows two feet apart, then buries the manure by two side furrows, and harrows the ground level, lengthwise of the furrows. This method requires less manure, and he has the advantage of hoeing the turnips in drills.'

We recollect, likewise, that we have read in several of our New-England newspapers that fine turnips have been raised by ploughing up old sward ground, some time in June, harrowing well and sowing from the 1st to the 20th of July, and this without the application of manure. But there can be no doubt that folding sheep or horned cattle on the land thus ploughed would very much enhance the crop.

All American writers on this subject, whose works we have perused, advise to sow seed of the common English turnip as late as about the middle of July. They tell us that late sowed turnips are much the best for the table, and that they are less liable to be injured by insects, if sown so late, than when sown much earlier in the season.

Turnips are frequently if not most generally raised in the United States as a second crop, and no doubt this practice is often very eligible, and may be perfectly consonant with the soundest maxims of good husbandry. But when it is intended to *make the most of your crop of turnips*, or to obtain as great a product as possible for the purpose of feeding cattle, we do not perceive any objection to giving turnips a larger portion of the season to grow in, than has been with us the general practice.

An English writer on agriculture, whose remarks on this and other agricultural topics appear to us to be judicious, and to display a thorough knowledge of the subjects of his essays, says, 'It is not pretended that there lies any solid objections to early sowing of turnips, simply considered; on the contrary, such seems to be the most proper means of obtaining a full crop; but the advantages of early sowing, whatever they be, are given up; and the season postponed from near three to five months by way of retarding the growth of the crop; that it may last to a later period in the spring, and receive less damage from the frosts than that to which it would be liable in its early maturity. The disadvantages attending this plan are a crop far inferior in weight to what might be obtained from the land; the very common risk of destruction from drought and fly. The weight and perfection of the turnips, being the objects, the land may be got ready for them as for any other early spring crop, and the seed sown with the first warm showers. This will afford ample scope for re-sowing, should the first seed fail, of which, however, granting it to be good, and the land sufficiently fine, I believe there is scarcely any risk.'

'As to any advantages of a crop previous to the turnips, nothing scarcely can stand in competition with the first crop of roots.

'The true turnip-soil is a deep sand, or sandy loam. Every gardener knows the proper time to begin hoeing turnips. In general, when the plants spread a circle of about four inches they are ready for the first hoeing. They are commonly left about a foot asunder. The second hoeing three weeks after the first.'

Those who desire to go extensively and successfully into the turnip culture should raise their own seed from the finest transplanted roots. An English cultivator says, 'It is wonderful what a small quantity of seed suffices for an acre of ground, and indeed equally so how it can be delivered and spread over such a breadth. A pint might be more than enough, but it is usual to broad-cast a quart on an acre.'

Dr. Dean's New-England Farmer asserts that 'the quantity of seed sown on an acre is never less than one pound, frequently a pound and a half, and by some two. According to the same work, it is very necessary for the success of the crop that a heavy roller be passed over the field immediately after harrowing in the seed, provided the ground is sufficiently dry, or as soon as it is in a fit condition. By this means the clods are broken, and much of the seed that would otherwise be exposed to birds, &c., will be covered, and the surface rendered smooth and compact thereby, and consequently more retentive of moisture, which will greatly promote the vegetation of the seed and growth of the plants.

If a quantity of lime were sowed over the field immediately after putting in the seed, it would probably preserve the crop against insects, and prevent the turnips becoming spongy, as well as increase their size. Unleached ashes, soot, and plaster, have also been highly recommended as manure for turnips. Thomas Mellville, Jun. Esq. of Pittsfield, Mass., in raising a crop which received the premium from the Massachusetts Agricultural Society in 1817, and which amounted to about 750 bushels to the acre, sowed his seeds in drills of twenty-eight inches the 21st of June, on ground previously well manured. The following day sowed on the acre thirty bushels slacked lime and fifteen bushels house ashes.

What we have said about the *early* sowing of turnips we would merely suggest as a hint, or something to be thought of, and perhaps become a matter of experiment. It appears to us that our custom of sowing turnips so late in the season, as is commonly practised, is an usage borrowed from the British husbandry without duly considering the difference of our climate from that of Great Britain, and the different uses to which this crop is commonly applied in the two countries. In England they usually feed turnips off the ground with sheep; or draw them for neat cattle during the winter as fast as they are wanted, and often let them stand in the field till spring, to supply green food for sheep at the time of their yeaning, &c. But in the United States, this crop must be harvested in autumn and secured from frost; and it would seem to be desirable that they should have had time to obtain their full growth before they are gathered.

'Ellis, an old writer on husbandry, says, "Turnips sooted about 24 hours after they are up will be entirely secured from the fly." Some advise, and it may be well, if not too much trouble, to leach-soot and sprinkle the young turnips with the liquor. M'Mahon, in treating of the cultivation of turnips, says, "the plants should be left from seven to twelve inches every way; this must be regulated according to the strength of the land, the time of sowing, and the kind of turnips cultivated; strong ground and early sowing always producing the largest roots."

'The width of the hoe should be in proportion to the medium distance to be left between the plants, and this to their expected size.

'The critical time of the first hoeing is, when the plants, as they lie spread on the ground, are nearly the size of the palm of the hand; if, however, seed-weeds be numerous and luxuriant, they ought to be checked before the turnip-plants arrive at that size; lest being drawn up, tall and slender, they should acquire a weak and sickly habit.

'A second hoeing should be given when the leaves are grown to the height of eight or nine inches, in order to destroy weeds, loosen the earth, and finally to regulate the plants; a third, if found necessary, may be given at any subsequent period.

'Here will the farmer exclaim against the expense and trouble of hoeing; but let him try one acre in this way, and leave another of the same quality to nature, as is too frequently done, and he will find that the extra produce of the hoed acre will more than compensate for the labor bestowed.

'Loudon says *Arch. Garrie*, a Scottish gardener of merit, tried steeping the seed in sulphur, sowing soot, ashes, and sea-sand, along the drills, all without effect. At last he tried dusting the rows, when the plants were in the seed-leaf, with quick-lime, and found that effectual in preventing the depredations of the fly. "A bushel of quick-lime," he says, "is sufficient to dust over an acre of drilled turnips, and a boy may soon be taught to lay it on almost as fast as he could walk along the drills. If the seminal leaves are powdered in the slightest degree, it is sufficient; but should the rain wash the lime off before the turnips are in the rough leaf, it may be necessary to repeat the operation, if the fly begins to make its appearance."'

NEW-YORK AMERICAN.

JULY 5—11, 1834.

LITERARY NOTICES.

PARLEY'S MAGAZINE, Vol. I. for 1833-4. *Boston:* LILLY, WAIT & Co.—This is really a very captivating volume. It is the collection for a year of the little semi-monthly numbers, which make, when neatly bound up, a book of 416 pp. with a list of contents at the end, referring to every marking fact in the volume. There is a great quantity of useful information contained in these pages, and in a very attractive form, with numerous wood-cuts—and all for *one dollar*.

PETER PARLEY'S BOOK OF BIBLE STORIES, for Children and Youth. *Boston:* LILLY, WAIT & Co.—The compiler states this to be made up, for the most part, from two little books recently published in England, the one entitled "Bible Letters," the other, "Gospel Stories." It consists of extracts, thrown into a familiar narrative, of the chief incidents communicated in the Old and New Testaments, is illustrated by engravings, and is well calculated to excite a desire in youthful minds to peruse, more at large, in the Bible itself, the events here only presented in outline.

THE NEW TESTAMENT—stereotype edition. *Boston:* LILLY, WAIT & Co.—Fine, clear print, and good paper, render this an excellent edition of the Book of books.

THE PARENT'S CABINET OF AMUSEMENT AND INSTRUCTION, No. 1. *Boston:* LILLY, WAIT, COLMAN, & HOLDEN.—A very pretty little volume of about 150 pages, occupied partly with amusing stories, intended to inculcate in an agreeable manner, some point of good feeling or good morals, and partly with familiar lessons in, and illustrative of, natural history and physical science. It is to be continued in ten successive numbers, and will, we think, add another useful series to the numbers of books now published and publishing for the instruction of childhood and youth.

We may add, generally, of all these publications from the press of Lilly, Wait & Co. that they are excellent in their mechanical execution.

CURIOSITIES OF LITERATURE, Second Series. 2 vols. by I. D'ISRAELI. *Boston:* LILLY, WAIT, COLMAN & HOLDEN. *New York:* GOODRICH & WILEY.—There is scarcely any more agreeable miscellaneous reading than that which the taste, the research, and the cultivated mind of the elder *D'Israeli* have collected in these two series of the Curiosities of Literature. Nor is it merely as agreeable reading that these volumes recommend themselves; for they are, too, full of instruction, by unveiling much of the private life and character of distinguished individuals, and frequently by elucidating obscure historical points, by reference to some document neglected or unknown, which the perseverance of this author has brought to light. Of this latter character is the paper we extract to-day concerning "the secret history of the death of Queen Elizabeth, and of the nomination of her successor.

We have only to recommend the style in which these volumes are published.

Secret History of the Death of Queen Elizabeth.—Elizabeth, from womanish infirmities, or from state-reasons, could not endure the thoughts of her successor; and long threw into jeopardy the politics of all the cabinets of Europe, each of which had its favorite candidate to support. The legitimate heir to the throne of England was to be the creature of her breath, yet Elizabeth would not speak him into existence! This had, however, often raised the discontents of the nation, and we shall see how it harrassed the queen in her dying hours. It is even suspected that the queen still retained so much of the woman, that she could never overcome her perverse dislike to name a successor, so that according to this opinion, she died and left the crown to the mercy of a party! This would have been acting unworthy of the magnanimity of her great character; and as it is ascertained that the queen was very sensible that she lay in a dying state several days before the natural catastrophe occurred, it is difficult to believe that she totally disregarded so important a circumstance. It is, therefore, reasoning *à priori*, most natural to conclude, that the choice of a successor must have occupied her thoughts, as well as the anxieties of her ministers; and that she would not have left the throne in the same unsettled state at her death as she had persevered in during her whole life. How did she express herself when bequeathing the crown to James the First, or did she bequeath it at all?

In the popular pages of her female historian, Miss Aikin has observed, that 'the closing scene of the long and eventful life of Queen Elizabeth was marked by that peculiarity of character and destiny which attended her from the cradle, and pursued her to the grave.' The last days of Elizabeth were, indeed, most melancholy—she died a victim of the higher passions, and perhaps as much of grief as of age, refusing all remedies and even nourishment. But in all the published accounts, I can nowhere discover how she conducted herself respecting the circumstance of our present inquiry. The most detailed narrative, or as Gray the poet calls it, 'the Earl of Monmouth's *odd account* of Queen Elizabeth's death,' is the one most deserving notice; and there we find the circumstance of this inquiry introduced. The queen, at that moment, was reduced to so sad a state, that it is doubtful whether her majesty was at all sensible of the inquiries put to her by her ministers respecting the succession. The Earl of Monmouth says, 'on Wednesday, the 23d of March, she grew speechless. That afternoon, by signs, she called for her council, and by putting her hand to her head when the king of Scots was named to succeed her, they all knew he was the man she desired should reign after her.'—Such a sign as that of a dying woman putting her hand to her head was, to say the least, a very ambiguous acknowledgement of the right of the Scottish monarch to the English throne. The 'odd' but very *naïve* account of Robert Cary, afterwards Earl of Monmouth, is not furnished with dates, nor with the exactness of a diary. Something might have occurred on a preceding day which had not reached him. Camden describes the death-bed scene of Elizabeth; by this authentic writer it appears that she had confided her state-secret of the succession to the lord admiral (the Earl of Nottingham); and when the earl found the queen almost at her extremity, *he communicated her majesty's secret to the council*, who commissioned the lord admiral, the lord keeper, and the secretary to wait on her majesty, and acquaint her that they came in the name of the rest to learn her pleasure in reference to *the succession*. The queen was then very weak, and answered them with a faint voice, that she had already declared, that as she held a regal sceptre, so she desired no other than a royal successor. When the secretary requested her to explain herself, the queen said, 'I would have a king succeed me: and who should that be but my nearest kinsman, the king of Scots?' Here this state-conversation was put an end to by the interference of the archbishop advising her majesty to turn her thoughts to God. 'Never,' she replied, 'has my mind wandered from him.'

An historian of Camden's high integrity would hardly have forged a fiction to please the new monarch; yet Camden has not been referred to on this occasion by the exact Birch, who draws his information from the letters of the French ambassador, Villeroy; information which it appears the English ministers had confided to this ambassador; nor do we get any distinct ideas from Elizabeth's more recent popular historian, who could only transcribe the account of Cary. He had told us a fact which he could not be mistaken in, that the queen fell speechless on Wednesday, 23d of March, on which day, however, she called her council, and made that sign with her hand, which, as the lords chose to understand, for ever united the two kingdoms. But the noble editor of Cary's Memoirs (the Earl of Cork and Orrery,) has observed, that "the speeches made for Elizabeth on her death-bed are all forged.' Echard, Rapin, and a long string of historians, make her say faintly (so faintly indeed that it could not possibly be heard,) 'I will that a king succeed me, and who should that be but my nearest kinsman the king of Scots?' A different account of this matter will be found in the following memoirs. 'She was speechless, and almost expiring, when the chief counsellors of state were called into her bed-chamber. As soon as they were perfectly convinced that she could not utter an articulate word, and scarce could hear or understand one, they named the king of Scots to her, *a liberty they dared not to have taken if she had been able to speak*; she put her hand to her head, which was probably at that time in agonizing pain. *The lords, who interpreted her signs just as they pleased*, were immediately convinced that the *motion of her hand to her head was a declaration of James the Sixth as her successor*. What was this but the unanimous interpretations of persons who were adoring the rising sun?'

This is lively and plausible; but the noble editor did not recollect that 'the speeches made by Elizabeth on her death-bed,' which he deems 'forgeries,' in consequence of the circumstance he had found in Cary's Memoirs, originate with Camden, and were only repeated by Rapin and Echard, &c. I am now to confirm the narrative of the elder historian, as well as the circumstance related by Cary, describing the sign of the queen a little differently, which happened on Wednesday 23d. A hitherto unnoticed document pretends to give a fuller and more circumstantial account of this affair, which commenced on *the preceding day*, when the queen retained the power of speech; and it will be confessed that the language here used has all that loftiness and brevity which was the natural style of this queen. I have discovered a curious document in a manuscript volume formerly in the possession of Petyt, and seemingly in his own hand-writing. I do not doubt its authenticity, and it could only have come from some of the illustrious personages who were the actors in that solemn scene, probably from Cecil. This memorandum is entitled,

'Account of the last words of Queen Elizabeth about her Successor.

'On the Tuesday before her death, being the twenty-third of March, the admiral being on the right side of her bed, the lord keeper on the left, and Mr. Secretary Cecil (afterwards Earl of Salisbury) at the bed's feet, all standing, the lord admiral put her in mind of her speech concerning the succession had at Whitehall, and that they, in the name of all the rest of her council, came unto her to know her pleasure who should succeed; whereunto she thus replied:

'*I told you my seat had been the seat of kings, and I will have no rascal to succeed me. And who shall succeed me but a king?*

'The lords not understanding this dark speech and looking one on the other; at length Mr. Secretary boldly asked her what she meant by those words, that *no rascal should succeed her*. Whereto she replied, that *her meaning was, that a king should succeed: and who*, quoth she, *should that be but our cousin of Scotland?*

'They asked her whether that were her absolute resolution? whereto she answered, *I pray you trouble me no more; for I will have none but him*. With which answer they departed.

'Notwithstanding, after again, about four o'clock in the afternoon the next day, being Wednesday, after the Archbishop of Canterbury, and other divines, had been with her, and left her in a manner speechless, the three lords aforesaid repaired unto her again, asking her if she remained in her former resolution, and who should succeed her? but not being able to speak, was asked by Mr. Secretary in this sort, 'We beseech your majesty, if you remain in your former resolution, and that you would have the king of Scots to succeed you in your kingdom, show some sign unto us: whereat, *suddenly heaving herself upwards in her bed, and putting her arms out of bed, she held her hands jointly over her head in manner of a crown*; whence, as they guessed, she signified that she did not only wish him the kingdom, but desire continuance of his estate: after which they departed, and the next morning she died. Immediately after her death, all the lords, as well of the council as other noblemen that were at the court, came from Richmond to Whitehall by six o'clock in the morning, where other noblemen that were in London met them. Touching the succession, after some speeches of divers competitors and matters of State, at length the admiral rehearsed all the aforesaid premises which the late queen had spoken to him, and to the lord keeper, and Mr. Secretary, (Cecil,) with the manner thereof; which they being asked, did affirm to be true upon their HONOR."

Such is this singular document of secret history. I cannot but value it as authentic, because one part is evidently alluded to by Camden, and the other is fully confirmed by Cary; and besides this, the remarkable expression of 'rascal' is found in the letter of the French ambassador. There were two interviews with the queen, and Cary appears only to have noticed the last on Wednesday, when the queen lay speechless. Elizabeth all her life had persevered in an obstinate mysteriousness respecting the succession, and it harassed her latest mo-

ments. The second interview of her ministers may seem to us quite supernumerary; but Cary's 'putting her hand to her head,' too meanly describes the 'joining her hands in manner of a crown.'

THE AMERICAN QUARTERLY REVIEW; No. XXX. Philadelphia: KEY & BIDDLE.—Here is a number which must satisfy the utmost wishes of those who insist that American Reviewers should occupy themselves solely or chiefly with American subjects—for, without exception, every paper is founded on American publications—although, as in Article XII, the translation of *Euphemio of Messina* is used mainly as the apology for a dissertation on Italian tragedy, as "Letters descriptive of Public Monuments, Scenery, &c. in France and Spain" afford the occasion of a somewhat minute description of Paris life, and localities. The number, however, is entitled to the higher praise of treating several very interesting subjects with great ability. We will briefly refer to some of them. The first paper is on the Writings of Washington, two volumes of which, as our readers know from a previous notice in this paper, have been published by Mr. Sparks.—The spirit in which the notice of these writings is conceived, may be judged by the following prefatory remarks:

At this period, particularly, it is good to dwell upon the deeds and virtues of Washington—his calm dignity—his noble modesty and distrust of his own powers—his disinterested generosity, and devotion of his all to the cause of his country. Now, when so frightful a change has come over the spirit of our rulers; when, instead of the hesitation, even in the exercise of clearly granted powers, which, as we shall see, characterized the acts of George Washington, our executive officers seem determined to consider themselves as placed at the helm of government to try how far they can strain constructive powers, or with what success they can usurp new; and deserting the safe path marked out by the experience of their predecessors, endeavor at novel and untried experiments upon the peace and happiness and comfort of the nation; when temperate conduct and temperate speech, those exterior demonstrations of a sense of the dignity of a high office, to which even the most absolute monarchs have been anxious to manifet their deference, have given way to disgraceful ebullitions of passion in language and action: when the devotion which marked our forefathers, and, which, in their instance, was manifested for their country and their whole country, has been narrowed down to a selfish attachment to party; when so many of our countrymen have raised up false idols, and seem willing to sacrifice on their altars the dearest interests of their neighbors; and when, O, blind infatuation! inferior men, these false idols, have been confidently compared to our Washington,—we say, in such seasons, it is profitable to perceive, by what fell from his own lips, what *he* was—to judge him by the undisguised statement of his own views and feelings—to trace this record from his earliest years, and to see his *private* conduct and his *private* virtues. Beholding, in such an examination, no sin of early youth to be lamented; no excesses of passion or of false feeling to draw a blush to the cheeks of age, we may with full confidence in the result of a candid comparison, present the portrait to all our countrymen, and asking them to "look upon this picture," and "on this," beg them to discard from their minds the unnatural vision in which any would be placed on a level with our great first president.

It is impossible for any one to dwell upon the character of Washington as Time and the Grave have irrevocably sealed it, without feeling the full force of these remarks, or being shocked with the irreverence which would compare a living Idol with him, who has no parallel.

To those who, having any pretension to a library, have neglected to possess themselves of these volumes, the article in the Review will serve as a stimulus, we apprehend, to repair, as soon as may be, the omission.

The second paper is on the *Life of Hamilton*, of which the first volume has recently been published by his son, *John C. Hamilton*. As it is our purpose, in the course of next week, if possible, to prepare a review of this book ourselves, we only add here, in reference to the article before us, that it is written with a deep and just sense of the value of the services and of the superior talents of that man, who, when time shall have dissipated or buried the calumnies of which he was the special object, will be acknowledged to have been second only to the Father of his Country.

The third paper presents a rapid and interesting sketch of the history of the Italian tragedy. Paper four is a capital review of Dr. Cox's book abusing the Quakers. It shows up the reverend divine in all his eccentricities, inconsistencies and intolerance, and goes far to prove, in connection with the profane and indecent lectures on the color and person of our Saviour, which, as we learn, this same personage is delivering to crowds of females at his Church in Laight street, that he ought not to be permitted to go at large without a guardian.

The fifth paper is on "the life and writings of *Robert C. Sands*," and it is instinct with the spirit which knows how to appreciate the ardent aspirations of such a mind as Sands's, and to relish the various excellences of those effusions he has left behind.

The next paper is on the biography of *Black Hawk*, of which it gives an outline; and this is followed by an essay on the Decline of Poetry, in which there is a good deal of common place, announced with elaborate and oracular emphasis. Paris and its anniversary sports, &c., follow; and the number concludes with its ablest contribution, that on the Public Distress. We have nowhere seen the topics connected with the removal of the deposites discussed with more calmness or more clearness than in this paper. We have marked for future insertion, and as especially deserving of general attention, for the perspicuity with which the argument is stated and enforced, the whole passage respecting the effect upon *Credit*, of what has been flippantly characterized as "the mere transfer of a certain amount of money from one side of the street to the other," but which was, in fact, a mortal blow to bank and mercantile credits throughout the nation.

LOVE AND PRIDE, by the author of Sayings and Doings; 2 vols.; Philadelphia, *Carey, Lea & Blanchard*.—These volumes exhibit, though in a less degree than previous works, the wit, the knowledge of character, and the sparkling style of their clever author. There are two separate stories, "The Widow" and "Snowdon"—the one intended to illustrate Love, and the other Pride; and thus combined, they give their title to the work.

TODD'S JOHNSON'S DICTIONARY OF THE ENGLISH LANGUAGE IN MINIATURE; Key & Biddle, Philadelphia.—This epitome of Mr. Todd's enlarged and valuable edition of the great English Lexicon is compiled by Dr. Rees; and the compressed form in which so much philological matter is compressed, renders it the very gem of dictionaries, as in accuracy and completeness it boldly challenges comparison with any work of the same size and class. It is intended to form part of a series of works, which, if completed on a similar scale, will enable one to carry a library of reference in his coat pocket. †

THE MECHANIC'S MAGAZINE, Vol. III. No. 6.—The June number of this periodical is before us, and a rapid glance at its contents discovers that it contains the same judicious preparation of materials that has hitherto distinguished the publication. There are a number of articles, essentially valuable from the solid information embodied in them, and others, again, that will recommend themselves at once to the less severe reader, who always looks for some entertainment to be mingled with instruction. We have, for instance, a paper on Civil Architecture, with another on Popular Whims and Superstitions, an article on a General Mean of Computing, Descriptive Data of Ellipsoidal Arches, with a new Theorem, and Mechanical Description of their working Drafts; and another upon the whimsical subject of the possibility of Naturalizing the Fire-Fly in England; a Memoir of Lafayette, with a full length portrait, engraved with much spirit; and a notice of Fairman's Rotary Steam Engine, with drawings of different parts of the machinery; a meteorological record; a phrenological paper, with engravings; and a notice of Burden's boat, with the claim set up by the English to it, &c. &c. †

SUMMARY.

A copy of the following letter, addressed by the American committee in Paris to the family of Lafayette, was forwarded by Dunscomb Bradford, Esq. our Consul at Paris, to a gentleman of this city, by whom it has been politely furnished to us for publication.

PARIS, MAY 21, 1834.

To George Washington Lafayette, Esq.

DEAR SIR.—At a meeting of the citizens of the United States now in Paris, assembled at the Hotel of the American Legation, we were charged with the melancholy duty of expressing to you and to your family their profound sympathy and condolence under the afflicting dispensation with which it has pleased Divine Providence to visit you.

In expressing to you the sorrow which we feel for the death of the great and good Lafayette we know that we are only anticipating the grief of every citizen in the United States, when the news of that lamentable event shall reach them.

The debt of gratitude that we owe to his memory as the defender of our liberties and our undeviating friend and advocate throughout his whole life, will cherish and live forever in the hearts of a grateful people down to their latest posterity. Never will they forget the Nation's friend. History will record his deeds and consecrate his name with those of the illustrious founders of American Independence.

He has gone to another and a better world to receive the reward due to a long life of devotion to the political and social alleviation of the whole human race. In the United States of America the great and illustrious name of Lafayette will forever be endearingly connected with that of the Father of American Liberty. Let us humbly hope that in the world to come, these ornaments of human nature may be permitted to reunite in eternal fellowship.

We might dwell upon the many sources of consolation which remain to you under the bereavement of your virtuous Parent but we forbear to intrude upon the sacredness of your sorrows at this moment of overwhelming affliction.

We conclude our melancholy duty by offering to you, and to every member of your family, in our own individual names, and in those of our fellow citizens now in Paris, the expression of our heartfelt sympathy and regret.

We remain, dear sir, most truly your obedient servants.

(Signed) HENRY BREVOORT, of New York.
J. WOOD, of Maine.
N. NILES, of Vermont.
CHARLES BROOKS, of Massachusetts.
S. B. DENISON, of Connecticut.
WILLIAM BURNS, of New York.
PHILIP KEARNEY, of New Jersey.
A. B. TUCKER, of Pennsylvania.
ALEXANDER CLAXTON, of Maryland.
FLAVEL S. MINES, of Virginia.
ARTHUR P. HAYNE, of South Carolina.
S. A. DUGAS, of Georgia.
W. P. D'ARUSMONT, of Indiana.
A. F. ELSTON, of Kentucky.
J. S. POMER, of Mississippi.
D. URQUHART, of Louisiana.
THOMAS P. BARTON, Chargé d'Affaires.
DUNSCOMB BRADFORD, U. S Consul.

APPOINTMENTS BY THE PRESIDENT.

By and with the advice and consent of the Senate.

William Hunter to be Chargé d'Affaires to Brazil, in the place of Ethan A. Brown, resigned.

Richard Pollard to be Chargé d'Affaires to Chile, in the place of John Hamm, resigned.

Eben R. Dorr to be Consul for Buenos Ayres, in the place of Geo. W. Slacum, removed.

William M. Gwin to be Marshal for the District of Mississippi, in the place of Samuel W. Dickson, appointed Receiver.

Humphrey H. Leavitt to be Judge for the District of Ohio, in the place of Benjamin Tappan, rejected by the Senate.

Charles Howerd, Elisha Tibbits, and Levi Elmeker, to be Directors of the Bank of the United States, in the place of Joseph White, Saul Alley and Roberts Vaux, who decline the appointment.

Thomas Dennison to be Consul for Bristol, in England, in the place of Patrick Macauley, resigned.

Thomas T. Smith to be Consul for Coquimbo, in the Republic of Chile.

William S. Parrott to be Consul for the City of Mexico, in the place of Richard Pollard, resigned.

George G. Hobson to be Consul for Valparaiso, in the place of Thomas S. Russell, rejected by the Senate.

Thomas B. Nalle to be Consul for Angostura, in the place of Thomas F. Knox, removed,

John Patrick to be Consul for Montevideo, in the place of Joshua Bond, removed.

Frederick List to be Consul for Leipsic, in the place of G. F. Goehring, deceased.

Marmaduke Burrough to be Consul for Vera Cruz, in the place of James James, deceased.

Morris Croxall, Surveyor and Inspector of the Customs for the port of Camden, in the State of New Jersey.

Archer Gifford, Collector of the Customs for the port of Newark, New Jersey.

Woodson Wren, Collector of the Customs for the port of Natchez, in the State of Mississippi.

John T. Cabean, Register of the Land Office created by the "Act to establish an additional Land Office in Arkansas," approved the 26th June, 1834.

Littlebury Hawkins, Receiver of public moneys arrising from the sale of public lands at the same office.

Joel H. Haden, Register of the new Land Office created in the southwestern part of Missouri.

Robert T. Brown, Receiver of public moneys arising from the sale of public lands at the same office.

William B. Slaughter, Register of the Land Office at Green Bay, in the Territory of Michigan, under the act to create additional Land Districts, in the States of Illinois and Missouri, and in the Territory north of Illinois.

S. W. Beall, Receiver of public monies arising from the sale of public lands at the same office.

John P. Sheldon, Register of the Land Office for the Wisconsin District, authorized by the same act.

Joseph Eneix, Receiver of public monies arising from the sale of public lands in the Wisconson District.

Samuel A. Barker, Register of the Land Office at Zanesville, Ohio, vice George H. Hoot, rejected.

Appointment by the President.

R. M. Williamson, to be Surveyor General of public lands south af Tennessee, for the State of Mississippi, in the place of Gideon Fitz, removed.

EXAMINATION OF MIDSHIPMEN.—The Board for the examination of Midshipmen, which assembled at Baltimore in May, adjourned on the 12th June, having examined all who presented themselves.

The following is a list of those found qualified for promotion, arranged in the order of merit, to which are added the names of the States to which they belong. Warrants have been granted, bearing the date 14th June, 1834.—[Army and Naval Chronicle.]

1826 Chas W Pickering, N H	32 Augustus L Case, N Y
1827 John de Camp, Flo	33 Roger Perry, Md
W J H Robertson, D C	34 Wm S Ringgold, D C
1828.	35 John T Williams, N C
1 Thornton A Jenkins, Va	36 Joseph W Revere, N Y
2 Joseph C Walsh, Pa	37 Alex'r M Pennock, Tenn
3 Charles H Cotton, Vt	38 R S B Darlington, Pa
4 Augustine W Provost, Pa	39 George F Emmons, Vt
5 Franklin Clinton, N Y	40 Edward Middleton, S C
6 James K Bowie, Md	41 Montgomery Lewis, Pa
7 John Rodgers, jr, D C	42 George McA White, D C
8 John S Marchand, Geo	43 C E L Griffin, N Y
9 Wm R Taylor, Mass	44 William S Swann, Va
10 H J Harstene, S C	45 Thomas T Hunter, Va
11 Lloyd J Bryan, D C	46 Albert A Heicomb, Ky
12 Benjamin F Sands, Ky	47 Gustavus H Scott, Va
13 Henry French, Mass	48 Richard Forrest, D C
14 William Leigh, Va	49 Levin Handy, Md
15 Samuel Larkin, jr, N H	50 David McDougal, Ohio
16 William H Burges, Va	51 Charles F McIntosh, Va
17 Henry S Stellwagon, Pa	52 James W Cooke, N C
18 Jas L Henderson, D C	53 C F M Spottswood, Va
19 Daniel S Ridgley, Ky	54 Henry C Flagg, S C
20 John L Ring, S C	55 Joseph Moorehead, Ohio
21 Henry J Paul, N C	56 Daniel F Dulaney, Va
22 Robert E Hooe, Va	57 George L Selden, D C
23 James M Lockert, Tenn	58 William H Ball, D C
24 William T Muse, N C	59 Elie W Stull, D C
25 William H Brown, Va	60 John F Mercer, Conn
26 Charles Stedman, S C	61 Stephen W Wilkinson, Tenn
27 Wm B Herndon, Va	62 James E Brown, Va
28 John C Graham, D C	63 Hendrick Norvell, Ky
29 John P Parker, N H	64 Charles C Barton, Pa
30 John F Borden, Ohio	65 J J B Walbach, N H.
31 James Alden, jr, Me	66 Joseph R Brown, Pa

THE EXPERIMENT NOT LOST.—This vessel built on the Annesley plan, has been reported lost. Letters from her Commander have been received of a late date. All well.

NEW HAVEN, (CONN.) JULY 1.—*Ordination.*—Lorenzo T. Bennett, late an officer in the United States Navy, was this morning ordained Minister of the Episcopal Church, in St. Paul's Chapel, in this city, by the Rt. Rev. Bishop Brownell. The candidate was presented by the Rev. Dr. Hawks, of New York, and several assisting Ministers attending.

ASTOR'S HOTEL.—The corner stone of this fine building was laid on 4th July at 6 o'clock A. M., in the presence of about a hundred spectators. A box was deposited beneath the stone with a silver tablet in it, containing the following inscription:

CORNER STONE OF THE PARK HOTEL.
Laid the 4th of July, 1834.
The Hotel to be erected by John Jacob Astor.
BUILDERS.
Philetus H. Woodruff, Peter Storms, Campbell & Adams.
SUPERINTENDENTS.
Isaiah Rogers and *Wm. W. Barwick.*
ARCHITECT.
Isaiah Rogers.

The daily papers of Thursday, the last No. of the Mechanics' Magazine, containing a full length portrait of Lafayette, and "Goodrich's Picture of New York," were also deposited in the box.

The dimensions of the building are as follows:—The length of the building, fronting Broadway, will be 201 feet 1 inch; fronting Barclay street, 154 feet; fronting Vesey street, 146 feet 6 inches. There are to be six stories: the height to the top of the cornice, will be 77 feet. In the centre there will be a court yard, measuring 105 feet by 76. Each of the fronts will be built of *blue Quincy granite*. As the principal entrance will be from Broadway, there will be four columns—two of the Doric, and two of Antæ—surmounted with entablature.

The National Intelligencer states that the President had gone on a visit to the *Hermitage*, to remain till next October.

APPROPRIATIONS FOR HARBORS.—Among these appropriations at the late session of Congress, were the following for harbors in this State—

Oswego Harbor - -	$30,000
Big Sodus Bay - -	15,000
Genessee River - -	20,000
Blackrock Harbor - -	12,000
Buffalo Harbor - -	20,000

Mr. Theodore Sedgwick, a passenger in the North America, is the Bearer of Despatches from Mr. Livingston, our Minister to France, to this Government. Among the despatches, are the original papers containing a list of American ships illegally captured, which after years of delay, have been obtained from the French Government.—The same Government has consented to give us the decisions by which the condemnation of those vessels were made.

The compensation to the sufferers on board the French line of battle ship *Sufren* from the shots fired through mistake by the U. S. frigate United States, is, according to the act passed by Congress, to be "twice the amount receivable by the Navy pensioners of the same or a similar class, of the wounded who survive, and to such relatives of those killed, as the President may deem it expedient to include in this provision."

THE CHOLERA.—We have seen a gentleman who left St. Louis on Thursday last—he brings the melancholy intelligence that this disease is raging in that city, and that it was increasing when he left.—The citizens are so reluctant to have the intelligence spread, that it is difficult to ascertain the number of deaths which take place from day to day. The reports vary from five to fifteen a day. A gentlemen who arrived here on Wednesday last, states that he saw six funerals in St. Louis on the preceding Monday. To show that the silence of the citizens and of the press is criminal, we will mention a circumstance that occurred there within a few days;—an individual, just arrived from Kentucky, put up at a public house—a person was sick in one of the rooms, and he visited him. Not anticipating this disease to be in the place, he was so shocked at the sight of this patient—who had the Cholera—that he immediately took sick, and in a few hours was a corpse. A very little precaution might have saved him. Our informant states that all who could, consistently, were leaving the city.—[Jacksonville Ill. Patriot.]

The following specimen of eloquence was delivered by an Indian woman over the contiguous graves of her husband and infant:

"The Father of Life and Light has taken from me the apple of my eye, and the core of my heart, and hid them in these two graves. I will moisten the one with my tears, and the other with the milk of my breast, till I meet them again in that country where the sun never sets."

Deaths by Cold Water.—On Tuesday seven persons died in consequence of drinking cold water, yesterday eleven persons died from the same cause, when greatly heated, and two from strokes of the sun. It is stated that several other persons were suffering under the influence of strokes of the sun, whose fates are yet doubtful.

Eight horses, some of them belonging to the omnibuses, fell down and expired when in harness, in consequence of the heat.

Important from Mexico.—The New Orleans Mercantile of the 25th June has the following paragraph:

"Mexican papers of a recent date furnish intelligence that General Santa Anna, having pronounced in favor of the conjoined cause of the clergy and army, is at the head of a considerable force near Tula, the capital of the State of Mexico, whence he has issued a proclamation dissolving the National Congress.—That body, not to be outdone by him, has passed a decree declaring the President *fuera de la ley*—an outlaw. Thus stood matters at our latest advices—the next will probably bring tidings of bloodshed and civil war."

[*From the Daily Advertiser.*]

LATE FROM SPAIN AND PORTUGAL.—The brig Mallory, Captain, Foster, from Gibraltar, brings papers from that place to the 24th of May, which contain much later intelligence both from Spain and Portugal than before received.

The Master of the Madona di Pieta arrived at Gibraltar, and who left Lisbon on the 19th of May, states there had been an illumination the evening before, in celebration of a victory obtained at or near Santarem, the result of which he understood to be the capture of six field pieces and three hundred prisoners. He also states, that a two-decker of Donna Maria's, lately returned from England, was to sail the day after he left, to blockade Madeira.

GIBRALTAR, MAY 17.—An article in the Cadiz Diary gives the particulars of one of the attacks upon Faro. This one took place on the 5th, and lasted from half past four in the morning till two in the afternoon, when Count Bourmont was obliged to withdraw, having lost 100 killed and near 400 wounded, out of about 6000 men with whom he began the attack. Baron de Sa was waiting for him the next day; but he marched upon Olhao, where he was again repulsed. If this is correct, and the Count was actually carrying on offensive operations against Olhao on the 6th, he could scarcely be known at Madrid, on the 10th, to have already reached Evora on his retrograde march, as stated in the Gazette of that date.

Cholera Morbus.—It has broken out to Elhaurin de la Torre, Cartama and Rio Cordo—two, three and five leagues from Malaga—and in the mountains.

GIBRALTAR, MAY 22.—The Madrid Gazette of May 17th, contains an account of the late interview between the Duke of Terceira and General Rodil, which we mentioned a few days ago. It was settled between them that the Duke should enter Thomar on the 14th and Golegan on the 15th, thus threatening, in that direction, Don Miguel's line of communication on the right bank of the Tagus. It was calculated, that on the last mentioned day, General Rodil, rapidly marching on Castellobranco, and by this movement threatening Abrantes, would have collected there the greatest part of the force under his command, which, for this purpose, were to move towards that point from Covilhao and Guarda under Generals Sanjuanena and Latre; and further, that if Don Miguel remained in the lines of Santarem, he would be attacked at once, in front and on his left, by Count Saldanha and the Duke of Terceira, while General Rodil, falling upon the Tagus and crossing it, would occupy the part of Alentejo, which is on the left of that river, putting himself in communication with the troops in Estremadura, and those which from Andalusia were advancing to Badajoz by forced marches.

It is re-stated that Don Miguel has thrown a bridge over the Tagus, and that he loses many men by desertion—no fewer than 50 superior and other officers, and 500 N. C. O. or privates, having surrendered to Donna Maria's Commanders in Coimbra within 24 hours after the occupation of that city.

The garrison of Chaves was partly composed of Spanish troops which were in communication with Valensa and Minho and Braganza where was Gen. Aviles. A guerilla of Miguelites and Carlists, being defeated near Alcanices, had completely disappeared. On the 8th, Brigadier Serrano was at Mertola with the Spanish troops under his orders.

From a despatch of the Captain-General of Estremadura, it was known that Don Miguel's authorities had demanded at Evora, Estremoz, Nillavicicosa, Borba and other towns in Alemtejo, 140 carts drawn by mules, and directed them to be forwarded to Santarem, which induced the supposition that the troops there had some rapid movement in contemplation. This notwithstanding, Bourmont continued in Evora, the Pretender in Santarem, and the ex-General Moreno in Avis, Frontera, Gelbeas and Abrantes.

General Queseda and Brigadier Oraa were at Larraga on the 7th, and General Lorenzo, close to them, in Mendigonia. Brigadier Linares was soon to join them, and station himself at Artajona. The rebels, divided into several bodies, had set themselves in motion, and Zumalacarregui marched from Villava to Urroz. The next day General Q. proceeded to Puente, General Lorenzo to Ciraqui, Brigadier Linares to Mendigorria, and Brigadier G. to Obanos. These are the only accounts, in the Official Paper, of the contending forces in the North.

None of the offers made by Spanish or foreign houses, for the loan of 200,000,000 reals which the Spanish Government requires, being deemed sufficiently advantageous, they have all been rejected; and in announcing this resolution of her Majesty, the official paper has made it known, that the question of the recognition of the loans effected in 1820, 1821, and 1822, will be referred to the Cortes.

By the packet ship North America, Capt. Dixey, from Liverpool, we have received our regular files of English papers to the 31st, inclusive.

The most important news brought by this arrival, is a change of Ministry in England, the grounds of which can hardly be set forth better than in the following remarks from the London Courier of the 29th of May. They are introduced by mentioning the resignation of Mr. Secretary Stanley and Sir James Graham.

The Cabinet, then, has been broken up, and broken up on a broad and distinct principle, which can leave no man in any doubt as to what side he ought to take. Mr. Stanley and his party maintain that all the possessions, all the revenues of the Church, are property which the State may distribute differently among the members of the Church, but cannot divert from ecclesiastical to secular purposes. The other branch of the Cabinet maintain that the revenues of the Church are not property in the rigid sense of the word; that they are, if not the gift of the State, secured to the Church by the State, and, that the State may not only direct a different appropriation of those revenues, among the members of the Church, and for ecclesiastical purposes, but, if it be desirable and proper, may divert those revenues to other than ecclesiastical purposes. That is the principle; the application is made to Ireland.—The revenues of that Church are enormously disproportioned to its duties, and to the number of people to whom it dispenses religious consolation and instruction. Moreover, those revenues are collected from a Roman Catholic population, who are equally as well entitled as his Majesty's Protestant subjects, to the protection of the laws, and those revenues are, and long have been, the sources of much vexation to that Catholic population, and of bitter strife and contention. In truth, our astonishment is excited, after running over the great number of authorities quoted by Mr. Ward, in his able speech last night, condemning the present Church Establishment of Ireland, and, after noticing the host of proofs he has brought together that all attempts to enforce the complete collection of that revenue have failed, and have led to little more than resistance and assassination;—we are astonished, after reading the opinions of our wisest Statesmen against the present system, and the proofs of its mischievous failures, that any man can for one moment hesitate to affirm that the State ought immediately to take measures to "reduce the temporal possessions of the Church of Ireland." Mr. Stanley, however, and those who think with him on this subject, deny the right of the State to abate one of the greatest acknowledged evils that ever existed in any country; they deny to the State the power to overturn a bad system; they bind the State to a subserviency to the Church; they make it the mere instrument for collecting the Church revenues; they bow with reverence before an enormous abuse; they tie by their principles the hands of the State, and compel it to submit to a master. The principle, therefore, on which the Cabinet has split is vital for all Governments, for it is neither more nor less than the assertion of the supremacy of the State over all its subjects, and over all those parts or portions of society which grow from its regulations, or are protected by its care. Mr. Stanley and Sir James Graham deny this supremacy, and their principles cannot be followed in reconstructing the Cabinet, without virtually admitting that the State is incompetent to remedy some of the most glaring evils of society.—To follow their doctrines must inspire the people of Ireland with despair; to embrace their principles would fill all the people of England, who desire an amended appropriation of Church revenues, with dismay, and would lead, by a short cut, to ruin the authority of the government in Ireland, and to weaken and degrade it in England. But they are out of the Cabinet, because they have maintained such a strange principle, and their resignation speaks, we think, hope to Ireland, and peace and confidence to all parts of the empire.

Like ourselves, the *Standard*, of yesterday evening, denied to the State the possession of property, and, like ourselves, found some difficulty in selecting a criterion for spiritual *wants*. It went, however, to Cambridge and Mr. Goulburn for aid, and adopted that one with which the late Chancellor of the Exchequer some time ago astounded the House of Commons. The *Standard* measures the spiritual wants of a population by the extent of a country. It is the 30,000 square miles of Ireland which makes it necessary to leave a Church nearly £1,000,000 a year, and nearly one-half of its Clergymen non-residents, and makes it necessary to keep the population in misery to collect the Church revenue.—By the same rule New South Wales or Hindoostan has a gross injustice done to it; and either of them, instead of its poor supply of a religious establishments, a Bishop and a Dean should be at least four times as well provided with Archbishops and non-resident Rectors as the 30,000 square miles of Ireland.

From the London Courier of May 30.]

The public continue to look forward with extreme anxiety to the completion of the new ministerial arrangements. And this is not certainly to be wondered at, seeing that the destinies of the country cannot fail of being materially influenced by the mode in which the Cabinet is reconstructed.

We have reason to believe, that the arrangements are settled, and we hope to be able to announce them in our Second Edition. We at present only know, that the Earl of Carlisle, who has a seat in the Cabinet, is to be Lord Privy Seal, and that it is generally believed that Mr. Spring Rice will leave the Treasury, and fill one of the vacant high offices, with a seat in the Cabinet.

We are confident that the Cabinet will be so constituted, that while, on the one hand, it will assist in cautiously eradicating every real and acknowledged abuse, it will give no countenance to any of those crude or theoretical projects that are now afloat.—We require a strong and liberal Government; but we also require one deeply imbued with constitutional principles, and with a determination to uphold and strengthen the bulwarks of the Constitution. If we were obliged to choose among extremes there can be no question that a Government resolved to support whatever is, would be far preferable to one disposed to abet reckless attempts at innovation. But the prevalence of either spirit in the Cabinet would be exceedingly hostile to the best interests of the nation. Abuses must be weeded out with a firm though considerate hand; not only because it is abstractedly right that they should be extirpated, but because any attempt to support them in despite of public opinion would be sure to occasion in the end till more extensive and perilous changes. It is opposed by some that any modification of the Church of Ireland will be the forerunner of an attack on the Church of England; and that all who are attached to the latter ought to act on the principle of *obsta principiis*, by resisting the first attempt at innovation. Nothing, however, can be more short-sighted than this. The Established Church of Ireland, as at present constituted, is not a support to, but a millstone hung round the neck of the Church of England, which, if not lightened, or detatched from the latter, will assuredly drag her to the bottom. Those, therefore, who propose making the Established Church of Ireland commensurate with the number and wants of those attached to her faith and doctrines, are not the enemies but the best friends of the Church of England. The effectual reform of the Irish Church will do more than any thing else to strengthen and consolidate the foundations of the English Church; and though such reform were not imperatively called for, that the foundations of peace and prosperity may be laid in Ireland, it would be called for that the Church of England may escape the disgrace of an alliance with such flagrant abuses; and that her well-being and permanence may be secured.

While, therefore, we hope and believe that the Ministry will be constituted so as to deal boldly with abuses, such as those inherent in the Irish Church Establishment, we also hope and believe that it will have sagacity to distinguish between what is rotten and what is sound; and that while it lops off the former it will resolutely protect and defend the latter. A Ministry acting in this way may not be popular with the *extreme gauche* or the *extreme droit*, but it will be popular with reasonable men of all parties, and will be sure to command the support and respect of the middle classes—that is, of those who possess eight-tenths of the property of the country, and who are distinguished by their moral worth and independence.

The change of Administration has taken place in consequence of a difference of opinion respecting the revenue of the Irish Church, and respecting that question alone. There is not, therefore, the slightest reason to expect any change of the general policy of Earl Grey's Cabinet. The country will unquestionably look for the immediate introduction into Parliament of some practical measure respecting the future appropriation of the Church property in Ireland, or of some declaration or resolution as to the measure to be adopted with that view, and for securing the permanent tranquility of Ireland at no distant period.

We are confident from what we know, that it is the intention of the Administration to pursue one or other of those courses.

Since writing the above, we have heard it confidently stated that Mr. Spring Rice is to be Colonial Secretary, that Mr. Francis Baring is to be Secretary of the Treasury, Lord Auckland to be First Lord of the Admiralty, Earl Mulgrave to be Postmaster General, Mr. Poulett Thomson to be President of the Board of Trade, and that Mr. More O'Ferrall is to have the vacant seat at the Treasury Board, in room of Mr. Baring. Mr. Ellice to have a seat in the Cabinet, retaining his present situation, in which he has given universal satisfaction. These arrangements we believe to be tolerably correct.

THIRD EDITION.—*Courier Office, 7 o'clock.*—We believe all the Ministerial arrangements a pecified in the preceding part of the paper to be almost settled, though not yet definitively fixed; but we are now enabled on suffieient authority to announce—

The Earl of Carlisle to be Lord Privy Seal.

Mr. Ellice, Secretary of War, to have a seat in the Cabinet.

Mr. Spring Rice, Colonial Secretary, with seat in the Cabinet.

Lord Auckland, First Lord of the Admiralty, with seat in the Cabinet.

Lord Durham is not going to Paris, as Ambassador, as stated by some of our contemporaries.

Lord Mulgrave, if appointed to the Post Office will not have a seat in the Cabinet.

The Trades Unionists of Leeds held another meeting on Monday, on Woodhouse-moor, at which there were about 3,000 persons present.

The *Garde National du Loret* states, that on on Thursday last a serious quarrel arose between some of the soldiers of the garrison of Orleans and some of the inhabitants of the town, which threatened serious consequences, but which was happily arrested in time.

According to accounts from Bayonne of the 22d, the Carlist chief Zumalacarreguy continued in "constant flight" before the Queen's troops, and very little more exertion was required to compel him and his followers to take refuge in France.

The funds in Paris remained in unusually quiet state, although the day of settlement is at hand.

M. Armand Carrel, the Editor of the *National*, has excited the suspicions of the Court of Peers, who have authorized an examination of his papers.

M. Bérard, the author, and M. Girard, the editor of a pamphlet entitled *Les Cancans fidèles*, were yesterday sentenced by default by the Court of Assizes to imprisonment for two years, and a fine of 2,000fr. for a libel on the King's person, and an attack upon the rights he holds from the will of the nation. —[Galignani.]

(See page 438.)

GOLD AND SILVER.—For the convenience and information of our readers, we publish altogether today, the three bills passed at the recent session of Congress, altering and regulating the value of gold and silver coins, foreign and domestic. With them, we publish the existing law, in order that it may be seen wherein the alterations consist.

There has been, hitherto, in the relative legal value of gold and silver such an inequality, as to banish gold completely from circulation. The question now is, whether, in attempting to remedy this evil, and to make the standard of the two metals correspond, gold has not been made, in relation to silver, too dear, as before it was too cheap. According to the new laws, to take effect from 31st instant, the legal value of gold has been raised 6 2-3ds per cent.; that is to say, the Eagle of the existing coinage, instead of being worth only $10, will be worth $10 67, and so in proportion. Henceforth, the standard of gold is to be so reduced, that the Eagle to be coined will only be worth $10.

The apprehension seems to be, that owing to this advance in the legal value of gold, silver may be driven out of circulation; but, on the other hand, the *commercial* value of silver is so much higher than its legal value, as perhaps, after all, to leave only a small difference, not perhaps exceeding one per cent. between the relative value of gold and it.

After all, however, these new laws are experimental, and if found to establish too great a difference in the value of the two metals, will be altered.

An Act concerning the Gold Coins of the United States, and for other purposes.

Be it enacted by the Senate and the House of Representatives of the United States of America, in Congress assembled, That the gold coins of the United States shall contain the following quantities of metal, that is to say: each eagle shall contain two hundred and thirty-two grains of pure gold, and two hundred and fifty-eight grains of standard gold; each half eagle, one hundred and sixteen grains of pure gold, and one hundred and twenty-nine grains of standard gold; each quarter eagle shall contain fifty-eight grains of pure gold, and sixty-four and a half grains of standard gold: every such eagle shall be of the value of ten dollars; every such half eagle shall be of the value of five dollars, and every such quarter eagle shall be of the value of two dollars and fifty cents. And the said gold coins shall be received in all payments when of full weight, according to their said respective values; and when of less than full weight, at less values, proportioned to their respective actual weights.

SEC. 2. And be it further enacted, That all standard gold or silver deposited for coinage after the thirty-first day of July next, shall be paid for in coin, under the direction of the Secretary of the Treasury, within five days from the making of such deposite, deducting from the amount of said deposite of gold and silver one half of one per centum: *Provided*, That no deduction shall be made unless said advance be required by such depositor within forty days.

SEC. 3. And be it further enacted, That all gold coins of the United States, minted anterior to the thirty-first day of July next, shall be receivable in all payments at the rate of ninety-four and eight tenths of a cent per pennyweight.

SEC. 4. And be it further enacted, That the better to secure a conformity of the said gold coins to their respective standards as aforesaid, from every separate mass of standard gold which shall be made into coins at the said mint, there shall be taken, set apart by the Treasurer and reserved in his custody, a certain number of pieces, not less than three; and that once in every year the pieces so set apart and reserved shall be assayed under the inspection of the officers, and at the time and in the manner now provided by law; and if it shall be found that the gold so assayed shall not be inferior to the said standard hereinbefore declared, more than one part in three hundred and eighty-four in fineness, and one part in five hundred in weight, the officer or officers of the said mint whom it may concern shall be held excusable; but if any greater inferiority shall appear, it shall be certified to the President of the United States, and, if he shall so decide, the said officer or officers shall be thereafter disqualified to hold their respective offices: *Provided*, That if, in making any delivery of coin at the mint in payment of a deposite, the weight thereof shall be found defective, the officer concerned shall be responsible to the owner for the full weight, if claimed at the time of delivery.

SEC. 5. And be it further enacted, That this act shall be in force from and after the thirty first day of July, in the year one thousand eight hundred and thirty-four.

Passed the House of Representatives,
Attest: W. S. FRANKLIN, *Clk. Ho. Rep.*
July 21, 1834.

An Act relating to the value of certain Foreign Gold Coins within the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the thirty-first day of July next, the following gold coins shall pass current as money within the United States, and be receivable in all payments by weight, for the payment of all debts and demands, at the rates following, that is to say: the gold coins of Great Britain, Portugal, and Brazil, of not less than twenty-two carats, fine, at the rate of ninety-four cents and eight-tenths of a cent per pennyweight; the gold coins of France, nine-tenths fine, at the rate of ninety-three cents and one-tenth of a cent per pennyweight; and the gold coins of Spain, Mexico, and Columbia, of the fineness of twenty-carats three grains and seven-sixteenths of a grain, at the rate of eighty-nine cents and nine-tenths of a cent per pennyweight.

SEC. 2. And be it further enacted, That it shall be the duty of the Secretary of the Treasury to cause assays of the aforesaid gold coins, made current by this act, to be had at the mint of the United States, at least once in every year, and to make report of the result thereof to Congress.

Passed the House of Representatives, June 21, 1834. W. S. FRANKLIN, *Clerk.*

An Act regulating the value of certain Foreign Silver Coins within the United States.

Be it enacted, by the Senate and House of Representatives of the United States of America, in Congress assembled, that from and after the passage of this act, the following silver coins shall be of the legal value, and shall pass current as money within the United States, by tale, for the payment of all debts and demands, at the rate of one hundred cents the dollar; that is to say: the dollars of Mexico, Peru, Chili, and Central America, of not less weight than four hundred and fifteen grains each; and those restamped in Brazil of the like weight, of not less fineness than ten ounces fifteen pennyweights pure silver in the troy pound of twelve ounces of standard silver; and the five-franc pieces of France, when of not less fineness than ten ounces and sixteen pennyweights in twelve ounces troy weight of standard silver, and weighin: not less than 384 grains each, at the rate of ninety-three cents each.

SEC. 2. And be it further enacted, That it shall be the duty of the Secretary of the Treasury to cause assays of the aforesaid silver coins made current by this act, to be had at the Mint of the United States, at least once in every year, and to make report of the result thereof to Congress.

Passed the House of Representatives.
Attest: W. S. FRANKLIN, *Clk. Ho. Rep.*
May 27*th*, 1834.

THE EXISTING LAW.

An Act regulating Foreign Coins, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the 1st day of July next, foreign gold and silver coins shall pass current, as money, within the United States and be a legal tender, for the payment of all debts and demands, at the several and respective rates following, and not otherwise, viz: The gold coins of Great Britain and Portugal, of their present standard, at the rate of one hundred cents for every twenty-seven grains of the actual weight thereof; the gold coins of France, Spain, and the dominions of Spain, of their present standard, at the rate of one hundred cents for every twenty-seven grains and two-fifths of a grain, of the actual weight thereof. Spanish milled dollars, at the rate of one hundred cents for each dollar, the actual weight whereof shall not be less than seventeen pennyweights and seven grains; and in proportion for the parts of a dollar. Crowns of France, at the rate of one hundred and ten cents for each crown, the actual weight whereof shall not be less than eighteen pennyweights and seventeen grains, and in proportion for the parts of a crown. But no foreign coin that may have been, or shall be, issued subsequent to the 1st day of January, one thousand seven hundred and ninety-two, shall be a tender, as aforesaid, until samples thereof shall have been found, by assay at the Mint of the United States, to be conformable to the respective standards required, and proclamation thereof shall have been made by the President of the United States.

SEC. 2. Provided always, and be it further enacted, That at the expiration of three years next ensuing the time when the coinage of gold and silver, agreeably to the act, entitled "An act establishing a mint, and regulating the coins of the United States, shall commence at the mint of the United States, (which time shall be announced by the proclamation of the president of the United States,) all foreign gold coins, and all foreign silver coins, except Spanish milled dollars and parts of such dollars) shall cease to be a legal tender as aforesaid.

SEC. 3. And be it further enacted, That all foreign gold and silver coins, (except Spanish milled dollars, and parts of such dollars) which shall be received in payment for monies due to the United States, after the said time when the coining of gold and silver coins shall begin at the mint of the United States, shall, previously to their being issued in circulation, be coined anew, in conformity to the act, entitled "An act establishing a mint and regulating the coins of the United States."

SEC. 4. And be it further enacted, That from and after the 1st day of July next, the fifty-fifth section of the act, entitled "An act to provide more effectually for the collection of the duties imposed by law on goods, wares, and merchandize, imported into the United States," which ascertains the rates at which foreign gold and silver coins shall be received for the duties and fees to be collected in virtue of the said act, be, and the same is hereby, repealed.

SEC. 5. And be it further enacted, That the assay, provided to be made by the act, entitled "An act establishing a mint, and regulating the coins of the United States," shall commence, in the manner as by the said act is prescribed, on the second Monday of February, annually, any thing in the said act to the contrary not withstanding. [*Approved, February* 9, 1793.

INTERESTING.—A subterranean Indian Village has been discovered in *Nacoochee Valley* in Georgia, by gold miners, in excavating a canal for the purpose of washing gold. The depth to which it is covered varies from seven to nine feet; some of the houses are embedded in a stratum of rich auriferous gravel. They are 34 in number, built of logs from six to ten inches in diameter, and from ten to twelve feet in length. The walls are from three to six feet in height, forming a continuous line or street of 300 feet. The logs are hewed and notched, as at the present day. The land beneath which they were found, was covered, at its first settlement by the whites, with a heavy growth of timber, denoting a great antiquity to these buildings, and a powerful cause which submerged them. Cane baskets and fragments of earthenware were found in the rooms. The account is contained in a letter to the editor of the Southern Banner, from which the following further particulars are extracted:

The houses are situated from 50 to 100 yards from the principal channel of the creek; and as no further excavations have been made, it is more than probable that new and more interesting developements will be made when the land is worked for gold.

A great number of curious specimens of workmanship have been found in situations, which preclude the possibility of their having been moved for more than a thousand years. During my mining operations last year, I found, at one time, about one half of a crucible, of the capacity of near a gallon.—It was ten feet below the surface, and immediately beneath a large oak tree, which measured five feet in diameter, and must have been four or five hundred years old. The deposite was diluvial, or what may be termed table land. The stratum, of quartz gravel, in which the vessels were imbedded, is about two feet in thickness, resting upon decomposed chlorite slate.

It is not difficult to account for the deposite of these substances in alluvial soil, for the hills are generally very high and precipituous, and from the immense quantity of rain which falls, the streams are swollen to great height, sweeping every thing with them, and frequently forming a deposite of several feet in thickness in a season; but some of the diluvial land is from 10 to 50 feet above the present level of the streams. These deposites exhibit appearances of as great attrition as those recently formed.

There was a vessel, or rather a double mortar, found in Duke's Creek, about five inches in diameter, and the excavation on each side was nearly an inch

in depth, basin like, and perfectly polished. It was made of quartz, which had been semi-transparent, but had become stained with the iron which abounds in quantity in all this country. In the bottom of each basin was a small depression half an inch in depth and about the same in diameter. What its use could have been, is difficult to conjecture. Some suppose it was used for grinding paint, &c. or in some of their plays or games. The high finish, and its exact dimensions, induce me to believe it the production of a more civilized people, than the present race of Indians. Respectfully yours, M. S.

INDIAN ANECDOTE.—John Sequashquash, an Indian of the remnant of a tribe in Connecticut, was some years since brought before a justice of the peace on some charge or other, which we do not now recollect. John happened to be drunk at the time and instead of justice, merely muttered out—"Your Honor is very wise—y.y.y.your honor is v very wise—I says."

Being unable to get any other answer from him, the justice ordered him to be locked up till the next day; when John was brought before him perfectly sober.

"Why John," said the justice, "you were drunk as a beast last night."

"Drunk!" ejaculated the Indian.

"Yes, drunk as a beast. When I asked you any question, the only answer you made was, "Your honor's very wise."

"Did I call your honor *wise?*" said the Indian, with a look of incredulity.

"Yes," answered the magistrate.

"Then," replied John, "I must have been drunk, sure enough."

FOREIGN ITEMS.

ST. PETERSBURG, April 30.—The communication with Armstadt is now perfectly free, the ice having broken up on the 26th.

The death of Mr. Stothard, at the venerable age of eighty four, has grieved all the lovers of art, though it has been long expected. But they regret to think that they can have no "more last words" from his Genius—no more of those sweet and graceful creations of youth, beauty, and womanhood, which never ceased to flow from his pencil, and which made his kindly nature the abode of a youthful spirit to the last. An angel dwelt in that tottering house, amidst the wintery bowers of white locks, warming it to the last with summer fancies. Mr. Stothard had the soul in him of a genuine and entire painter. He was a designer, a colorist, a grouper; and, above all, he had *expression*. All that he wanted was a more perfect education, for he was never quite sure of his drawing. The want was a great one; but if those who most loudly objected to it had a tenth part of his command over the human figure, and even of his knowledge of it (for the purposes of expression,) they would have ten times the right to venture upon criticising him; and having that, they would have spoken of him with reverence. His class was not of the very highest order, and yet it bordered upon the gentler portion of it, and partook of that portion; for since the days of the greatest Italian painters, no man felt or expressed the graces of innocence and womanhood as he did. And his coloring (which was little known) had the true relish, such as it was. He loved it, and did not color for effect only. He had a bit of Rubens in him, and a bit of Raphael—and both of them genuine; not because he purposely imitated them, but because the seeds of gorgeousness and of grace were in his own mind. Mr. Stothard, for many years, was lost sight of by the public, owing to the more conventional elegancies of some clever, but inferior men, and the dullness of public taste; but it was curious to see how he was welcomed back again as the taste grew better, and people began to see with the eyes of his early patrons. The *variety* as well as grace of his productions soon put him at the head of designers for books, and there he has since remained. What he did of late for the poems of Mr. Rogers is well known, and his picture of the Canterbury Pilgrims still better, though we cannot think it one of his best. Many of his early designs for Robinson Crusoe and other works, especially those in the old Novelist's Magazine, far surpass it; and so do others in Bell's British Poets. There is a female figure bending towards an angel in one of the volumes of Chaucer in that edition, which Raphael himself might have put in his portfolio; and, the same may be said of larger designs for editions of Milton and Shakspeare. See in particular those for Comus, and for the Two Gentlemen of Verona, where there is a girl in boy's clothes. Nothing can be more true or exquisite than that little doubtful gesture of fear and modesty in the latter figure, blushing at the chance of detection. Stothard excelled in catching these fugitive expressions of feeling—one of the rarest of all beauties. But he has left hundreds, perhaps thousands of designs—rich treasures for the collector and the student. He is one of the few English artists esteemed on the continent, where his productions are bought up like those of his friend Flaxman, who, we believe, may be reckoned among his imitators; for Stothard's genius was richer than his, and included it. —[Leigh Hunt's Journal.]

Important Discovery.—The celebrated orator Henly, who gave public lectures, being somewhat pushed for want of attractive novelty, and wishing to collect an audience on any terms, issued an advertisement, expressly addressed to journeymen shoemakers, wherein he promised to prove to demonstration the practicability of any members of the craft making *six* pairs of shoes in a day, provided he had sufficient materials. Such a temptation produced the desired effect, and the room was crowded to suffocation. Henly ascends the rostrum, and mute attention reigns. He thus began: "Gentlemen, the lecture of this evening being of a professional character, is intended to rouse industry, and stimulate exertion, in one of the most useful classes of the working community." (Applause.) The solemnity with which the opening speech was delivered increased the attention and impatience of the company for the developemect of this invaluable mystery.—After a short pause, a general cry of "question, question," compelled the orator to resume the subject. "Gentlemen, although the communication I am about to make only specifies the practicability of one person making six pairs of shoes in a day, yet, with a sufficient stock of materials, the same person might facilitate sixty, nay a hundred," (*thunders of applause*). Curiosity and anxiety were now at their height—"This grand and valuable secret, gentlemen, consists in simply *cutting the legs off boots!*" [Metropolitan.]

Elegant Intervals of the Fine Arts.—Hayman, the painter, it has been said, was a hero of the fist; and that the heroic Marquis of Granby, who was fond of the same amusement, when he went to sit to Hayman for his portrait, insisted on having a set-to with the artist before he began his work. The proposal was agreed to and carred into effect immediately. They began in good humor, but as the fighting gloves had not then been invented, a clumsy blow from one roused the anger of the other; they set-to in earnest, and upset easel as well as combatants. The noise made by the fall alarmed Hayman's wife; she burst into the room and found the peer and the painter upon the floor, grappling one another like enraged beasts, each striving to keep the other down while himself got upon his legs. She parted the combatants, and when they had re-adjusted their dresses, Hayman proceeded to complete the portrait of his antagonist.—[Shilling Magazine.]

It may happen that the birds of prey interfere with our plans, though it is probable, that in their case, as well as in that of many other birds, we know the evil but not the good; and consequently, in our eagerness to destroy the evil, we destroy the good along with it, and in the end lose much more than our labor. We set a price on the brush of a fox, or the talons of an eagle, but it is open to every man's observation, that those places, in which foxes are not hunted or eagles shot, are not more impoverished than those in which both are destroyed with the utmost vigilance. Nature never sends any animal to inhabit a district, unless there be food and the other circumstances which suit that animal in that district; and when the food ceases, or the circumstances are changed, the animal disappears, as fast probably as is necessary to the best interests and perfection even of our artificial system. The kite would doubtless be a plunderer in the poultry-yard, the osprey in the fish-pond, or the eagle in the rabbit warren; and the owner might claim their lives. If we actually use any portion of the earth, then that portion is ours, and we may do with the wild creatures as we may deem best. But we should not play the tyrant with that which is not ours. If we can show that it will be useful for us to destroy the kite in the wide moor which we neglect, and the eagle in the mountain ravine which we can neither stock nor cultivate, then we may plead our privilege as lords of the nether world, and slaughter them; but if we cannot, we are interferfering with, and most probably maring, that which we do not understand—acting much in the same manner as the owner of an estate, who should cut down the forests when he could neither use nor yet cultivate any other crop on the land which it occupied.—The birds of prey are not merely a part of the system of nature, but one of the most interesting parts of it, and there are no birds, the haunts or the habits of which are more calculated to impart information and afford pleasure. In strength, in swiftness, in bold daring, in patient endurance, in attachment to each other and to their young, and in utmost perfection of observing power and muscular strength, there are no birds equal to the birds of prey. Drive the Eagle from the mountain, and half its sublimity will be gone; chase the owl from the ivied ruin or the hollow tree, and half its fascination, even to the unobservant rustics, would be destroyed.—[Mudies' British Birds.]

The porter of a Dublin grocer was brought by his master before a magistrate on a charge of stealing chocolate, which he could not deny. Upon being asked to whom he sold it, the pride of Patrick was greatly wounded. "To whom did I sell it?" says Pat; "why, does he think I took it to sell?" "Then, sir," said the magistrate, "what did you do with it?" "Do with it! Since you must know," said he, "we made *tea* of it."—[New Sporting Magazine for May.]

[FOR THE N. Y. AMERICAN.]

Mr. Editor—I am a very young lady and a very pretty one besides, and I have a whole host of admirers. To *one* of these, who *does not reside* in the *city*, I am very anxious to send some poetry, but my *father*, who is a grave, steady, and respectable old gentleman, says it is not proper for young ladies and young gentlemen to correspond. Now, Mr. Editor, I have heard a great deal of your gallantry, and I venture to hope you will oblige *one of your most constant readers* and a *beauty* to *boot*, by inserting the following stanzas in the N. Y. American:

POUR LUI.

From Moore's Song "To Sigh yet feel no Pain.

"To keep one sacred flame
Thro' life unchilled, unmoved;
To love in wintry age the same
That first in youth we loved;
To feel that we adore,
To such refined excess,
That tho' the heart would break with more
We could not live with less.
This is faithful, faithful love,
Such as saints might feel above."

C. F. S.

HEART'S EASE.

Seek not for me in the lighted halls,—
Mine is no garland for festivals,
Look not for me in the wreaths they twine
Round urns of perfume and cups of wine:
Though torn away from my forest lair
To deck their banquets—I perish there,
'Neath the heated lip and the flashing eye,
I smile—but smiling—I die—I die.

And some come there, with their cheeks of bloom,
Like roses wreath'd round a marble tomb,
Or the soft pink tints in some Indian shell,
Lit with the blush of the sun's farewell—
With locks, like the first light clouds at dawn;
With the dreamy gaze of the woodland fawn
They come to seek me. Alas! for all
Who seek "Heart's Ease" in the masquing hall!
The feast and the feaster have passed away—
The lamps are winking in morning's ray—
And the withered chaplets hang idly down;
And the mirror is mocking its faded crown.
And *they* that stood 'midst the festal cheer,
Like the wounded fawn or the stricken deer,
With their strange bright eyes and their fatal bloom,
Have passed from the revel away—to the tomb!

They found me—they found me—but all too late,
Young hopes had died in the grasp of Fate,—
The bloom had fled, like the last bright streak
In the burning west, from the blighted cheek,
And the pallid taper—and holy hymn
Were there for rite and for requiem,—
And grasped in their cold white fingers lay—
"Heart'sease"—Oh, how calm were those hearts that day

O, seek ye for me—seek ye for me
In the bowery shade of the forest tree,
Where the far off tones of the hunter's horn,
Rouse not the hare from its nest at morn,
Where the joyous brook glides laughing by,
Feeding the echoes with melody;
And the lilies, like Brahmins at even tide,
Are bent, as in worship, its streams beside.

Oh, seek ye for me—seek ye for me,
Where the summer birds love most to be,
And the worn out breeze with feeble sigh
Comes oft, like a love sick youth, to die—
And gathered the old oak boughs among
The white wood doves—like a vestal throng
In some ancient cloister, all dark and dim—
Are lifting to Heaven their evening hymn.

Oh, seek ye for me—seek ye for me
In the morning track of the joyous bee,—
Follow the streamlet through the wood and glen,
Follow the glow worm—you'll find me then,
For it loves to roam through the bowers at night,
And wave over flowers its elfin light;
Meet guide for such as would seek for me
In the calm of my forest sanctuary.

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

The Emperer of Russia has issued an extremely severe Ukase, the object of which is to keep all Russians within the empire, or confiscate their property if they presume to reside abroad.

Marshal Bourmont has arrived in Geneva, where, it is said, he intends staying some time.

A report is mentioned in a letter from Geneva, which is to the effect that the late offensive official note of the Sardinian Ambassador in Switzerland had been disavowed by his Government. The letter farther says, that nothing shows an approaching rupture between Sardinia and Switzerland.

Letters of the 29th ult. from Constantinople, announce that the Greek Ambassador, Tographos, has at length been congratulated in the name of the Ottoman Porte, by the chief Dragoman, who, at the same time, delivered to him the usual presents, consisting of exquisite flowers and fruits, and invited him to a first audience of the Grand Vizier, which will soon be followed by an audience of the Sultan.

ITALY.—Extract of a letter of the 14th instant, from Ferara:—"A very serious affray took place two days ago in this city between the Swiss and the Austrians upon the occasion of the funeral of our bishop. The dispute commenced between some soldiers who escorted the provisions, and soon it spread to all the others, so that they came to blows, and several on both sides were killed and wounded. The number killed or seriously wounded is at least twenty. The Papal Government has ordered the Swiss to quit the city, and has distributed them in other cities of the legations. An Austrian corps will come here to take their place."

By a return laid before the House of Commons, on the motion of Mr. Leonard, it appears that in the course of last year, 246 persons were sentenced to death for robbery, of which number 7 only were executed.

ODESSA, April 18.—For some days past large quantities of corn have been shipped here for the sea of Azoff. It is probable that some ships have already reached Kulock.

One day last week, as a farmer at Courseulles was tilling his land, his plough struck against some hard substance, which he at first supposed was a stone, but afterwards discovered to be an earthen vessel, containg a large quantity of gold coin of the reign of Charlemagne, the metallic value of which has been ascertained to be at least 40,000 francs. As they are in the highest state of preservation, they must be considered as worth a much larger sum.—[French paper.]

REVIEW OF THE NEW YORK MARKET—JULY 9.

ASHES—Sales are freely made at $4 for Pots, and $4 25 a $4 30 for Pearls.

COAL—We have no transactions to notice in any description. Of Liverpool there is but little in market.

COTTON—The transactions in this staple, since our last publication, have been moderate, amounting to about 650 bales, as follows:

400 Uplands, 12¼ a 14¼ cents; 300 Florida, 13¼ a 14½, and 50 Mobile, 14½ a 15 cents.

Import, since our last, from New Orleans, 241; Florida, 243; Georgia, 998; South Carolina, 329; North Carolina, 313. Total, 2124 bales. Total import since 1st instant, 2857 bales. Export from 1st to 4th instant, 460 bales.

COTTON BAGGING—Last sales of best Hemp at 22 a 23 cents. The stock in market is small.

FISH—There is but little inquiry for Mackerel. Small sales of No. 1, at $6.12 ½ a $6.37 1-2, and No. 3 at $3.12 1-2. Of No. 2 there are none in market.

FLOUR AND MEAL—Sales of Western Canal at $4.87 1-2 a $5, and of Ohio, to a considerable extent, at $4 81 There has been no demand for export. 200 hhds. Corn Meal were disposed of at about $15.75. Exports, from 1st to 4th inst., Wheat Flour, 1152 bbls.

GRAIN—Sales of Western Wheat have been made at 103 a 105 cents; Northern Rye at 92 1-2 cents, and Northern Yellow Corn at 68 cents. The demand for Oats is brisk, and considerable sales have been made at 40 cents.

LEAD—The market remains without animation.

MOLASSES—No transactions of consequence have come to our knowledge.

OILS—From 15 to 16,000 gallons Whale have been disposed of at 27 1-2 a 28 cents, cash; about 10,000 gallons English Linseed at 90 cents, 4 months, and several smaller lots at about the same rate; a few casks of Palm brought 6 cents per pound, on time

WHALEBONE—A lot of 1000 lbs. has changed hands, since our last, at 19 1-2 cents, cash.

WINE—We have no transactions of consequence to notice.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

j31 6t

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabethstreet, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examin these Cars; a specimen of which may be seen on that part o he New-York and Harlæm Railroad, now in operation.

J25 tf

RAILROAD CAR WHEELS, BOXES AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Hearttе.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833

To Messrs Ewin and Hearttе—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m25

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 23 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by	½	inch,	*Flat Bars* in lengths of 14 to 16
200 do.	1½ do.	¼ do.	feet counter sunk
40 do.	1½ do.	½ do.	holes, ends cut at
800 do.	2 do.	¼ do.	an angle of 45 de-
800 do.	2½ do.	½ do.	grees with spli-
soon expected.			cing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2¼, 2⅝, 2¾, 3, 3¼, 3½, and 3¾ inches diameter for Rail wayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathemaucal Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other decription of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to interal angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1832.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norrist. Railroad

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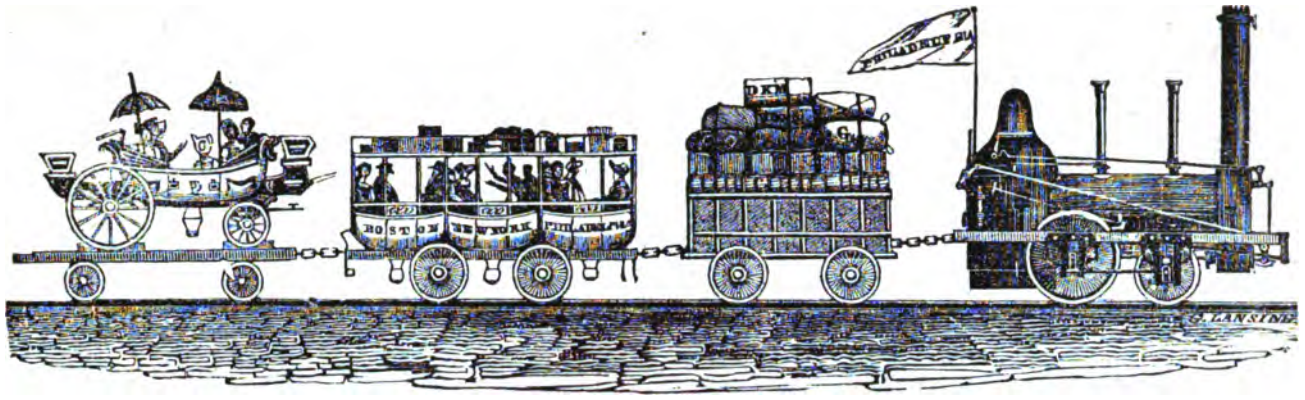

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] **SATURDAY, JULY 19, 1834.** [VOLUME III.—No. 28.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JULY 19, 1834.

Railroads.—We have taken some pains to obtain correct information relative to the different railroads in this country, that we might publish it in a condensed form, for the convenience of those who read the Journal. It is very difficult, however, to obtain any account relative to many of them, and even when descriptions have been furnished, in some cases there is a want of precision, which is always desirable when one seeks for information for practical purposes. It will therefore be seen that in many instances the brief descriptions given, are derived from sources not authentic, and of course there must be errors. They are given, however, by way of eliciting more correct accounts from those who have the means of giving them. It is hoped that gentlemen connected with the different railroads, who have not, as requested, forwarded a description of these works, will, on the receipt of this and the subsequent numbers containing these brief accounts, furnish without delay a statement from which the necessary corrections may be made—as the type will be kept standing for that purpose. We are the more desirous to receive such corrections, as it is intended to have them accompany the *Railroad Map*, (which is now nearly ready,) in a small portable form.

It is desirable that the date of charter, amount of capital, commencement, progress, and present condition of the work should be given—also, the length, route, mode of construction, and probable connection with other roads, should be given, together with such other facts as may be of interest to those engaged on other works. It is a matter of great interest to know with what other roads they may eventually be connected.

Extracts from the Common-Place Book of an Engineer.

Philadelphia and Columbia Railroad.—Leaving the depot at the intersection of Vine and Broad streets, from which various branches pass to different parts of the city, the line extends up the valley of the Schuylkill through Pratt's Garden to the viaduct, a distance of three miles. Various reports, arising from conflicting interests, had been made on the eastern termination of this road, prior to the selection of its present location. The one that has been adopted, appears to be the best suited to the nature of the ground, as well as presenting fewer objections than any other of the proposed routes. The viaduct crosses the Schuylkill just below Peter's Island. It is 1045 feet long, 41 feet wide, and 30 feet above the surface of the water. It is built on six piers of hammer dressed masonry, one of which is in 26 feet depth of water, and in addition to a double track of railway, affords ample convenience for both carriages and foot passengers. Immediately succeeding the viaduct, comes the Schuylkill inclined plane, the length of which is 2805 feet, and lifting 1 in 15. At the head of the plane is a steam engine of 60 horse power, with which is to be connected a "fan wheel" and "friction lever," to aid it in passing cars down the plane. By the report of the engineer, it will be found that it will be enabled to pass over 1920 tons for every twelve working hours. The line passes from thence over an undulating surface, requiring heavy excavations and embankments, through portions of Philadelphia, Montgomery, and Delaware counties, till it reaches the viaduct of Valley Creek. The alignement of this part of the road presents numerous curvatures, all of them on radii exceeding the minimum of locomotive power. A flat rail 15 feet long and 2 1-4 by 5-8, laid on two continuous lines of granite sills, well embedded in trenches of broken stone, forms the superstructure of this part of the line. The Valley Creek Viaduct is composed of a wooden superstructure, (Burr's plan,) on abutments and piers of rubble masonry. It is composed of five spans, the aggregate length of which, with the piers, is 592 feet. It is 18 feet wide, and from 35 to 55 feet above the surface of the ground. Immediately beyond the viaduct, the traveller catches the first glimpse of the Great Chester Valley, long esteemed to be one of the most beautiful and fertile sections of the state. At the distance of 21 miles from Philadelphia, the line is intersected by a branch road leading to Westchester, the cost of which was about $85,000 for a single track. At 30 miles, a little to the south of Downingtown, it crosses to the East Brandywine, by a viaduct 465 feet long, and 25 feet high, on a construction similar to that of Valley Creek. Some distance farther, the line crosses the West Brandywine by a viaduct 835 feet long, and 72 feet above the surface of the water, resting on 4 piers of hammer dressed masonry. This viaduct is without a cover, the cars passing in fact over its roof, which is seamed and caulked, like the deck of a vessel. Still ascending the main valley of Chester, the line reaches the summit, which divides it from that of Lancaster. This place is known as the Deep Gap Cut through Mine Hill, and it is believed that for its size there is not another instance in this country of similar difficulties of execution. The cut originally proposed at this place, was 37 feet deep and a half mile long, but owing to the discouraging nature of the ground, abounding with slips, springs and quicksands, to counteract the evil effects of which, at the depth proposed, all the efforts of the skilful engineer and enterprising contractors had proved unavailing, and which, if ever counteracted, would have most probably cost over $300,000. It became necessary, in order to diminish the cutting, to raise the grade, which hitherto had seldom exceeded 30 feet per mile to 45 feet, and even now, though at only 8 or 10 feet deep, it required heavy piling and substantial platforms before the road could be carried through. Thence descending the Lancaster valley, the road crsses the Pequa, by a viaduct 150 feet long and 18 feet high, and soon after, Mill Creek by a similar construction, 550 long and 40 feet high. Thence it follows the general features of the country till it reaches the immense viaduct over Conestoga River. The piers are of rubble work, 60 feet above the surface of the water, the whole length of the platform being 1412. To economize in the width of the structure beyond that necessary for strength, only three lines of rails have been laid, giving all the convenience of a double, without the inconveniences of a short curve, and two switches rendered necessary by a single track. Not long after, the line enters Lancaster by a high embankment, the materials of which were obtained from the deep rock cutting in the town. The location, as well as the grade of the road, has been materially changed from that originally intended, the extra expense of which was defrayed by the town, in consideration of the advantages it thereby gained. From Lancaster the line passes through a beautiful section of the county of the same name, presenting no very great irregularities of profile, or difficulties of construction other than the viaduct over the Little Conestoga, 804 feet long and 47 feet high, not long after which it arrives at the summit of the Columbia inclined plane. The view that here presents itself of the broad and noble Susquehannah, covered with arks and vessels bearing the varied products of the North and West, and spanned with its magnificent bridge of more than thirty arches, and a mile and a quarter long, is such as amply to repay one for the day's journey over this "iron avenue to the West." The Columbia plane is 1800 feet long, with a rise of 1 in 20. The engine is of 40 horse power, which, taken in reference to the plane, is of the same capacity as that of the Schuylkill. From the plane the line passes through Columbia to the basin of the eastern division of the Pennsylvania Canal. Examinations and estimates have been made in relation to joining the line with the bridge, which have resulted in the proposition of an inclined plane, with horse power, running at right angles to the line of the bridge, and communicating with it by means of revolving platforms. The construction of this road was authorized by the Legislature in 1828, but owing to a delay in the appropriations, it is not yet finished, but there is every probability of its being completed by January, 1835. On the first ten miles the construction has already been described; on the remaining 72, the Clarence or Wiggan rail and chair has been adopted, to be laid on stone blocks and locust sills. The sill is so disposed as to be at every 15 feet lineal on the straight line, and every 9 feet on the curves. The blocks and sills to be laid in trenches of broken stone, well rammed. On the newly formed embankments a superstructure of wood has been adopted in preference to the stone, on account of its easier adjustment. The cost of whole line, when completed for locomotive power, including the cost of all engines, will be $3,595,809 98, or about $43,851 per mile.

STEAM CARRIAGES.—The article to which the following refers, was published in the last number of the Journal, at page 420.

Col. Maceroni has addressed the following letter to a morning paper:

Sir,—You certainly have made a mistake in saying that the coach, on Saturday last, went at eighteen miles the hour, when it overtook and passed the stage, whose four horses were "put to their utmost speed, with a velocity comparative to that with which the stage coach would have passed a waggon."

Wyatt, of the Watford and Aylesbury coach, the one to which you refer, is very angry at your asserting that his fine team of horses were overtaken and passed in the manner you speak of by the steamer, when the latter did not perform more than 18 miles the hour! Wyatt knows the steamer well; he was once beaten by it going up Windmill-hill; and he says—and I say—and all the others say, that when the steam carriage overtook him, and passed him on Saturday, it was undoubtedly at a pace of more than 24 miles the hour.

We have many times done two miles in five minutes, and you shall see it done again whenever you are so disposed.

You show that the speed of the whole ten miles, including several stoppages and the turnpike, &c., was above fifteen miles the hour. Surely to overtake and pass a team of four fine horses at their "utmost speed," as we did, must have required more than eighteen!

But to set the matter at rest in your mind, I will keep a seat for you in the carriage on an occasion which will offer in a few days, of putting to the test, at their utmost speed, a chosen team of horses, a fourteen mile heat, on the most hilly and softest road out of London. I have the honor to be, sir, your most obedient servant, FRANCIS MACERONI.

Wharf 19, Paddington-green, May 26, 1834.

Third Annual Report of the Engineer and Agent of the Boston and Providence Railroad Corporation,

Office of the Boston and Providence Railroad Co.
Boston, June 1, 1834.

To the President &c.

GENTLEMEN—On the periodical return of the annual meeting of the Stockholders, although from personal observation you may be said to be conversant with the daily progress and condition of the work, which, under your supervision and control, has been committed to my management,—in accordance with usage, the opportunity is embraced to review the past operations of the Company, and briefly to allude to its future prospects.

At the date of the last annual meeting, as you were, in my absence, apprised by Isaac Trimble, Esq., the principal Assistant Engineer of the Company, the location of the Railroad had been definitively established, and the construction of the same begun on the first twenty-two sections, into which the road-bed had been divided between Roxbury and Sharon, including a distance of seventeen miles, or extending to a point eighteen and three quarter miles from the City of Boston; that, although but comparatively little progress had been made in the graduation of the road-bed, "all contracts were being executed satisfactorily," and it was believed—from the absence of serious difficulties "not foreseen," or, not included in the deep excavations, embankments, &c., which your Board had very wisely concluded to encounter, (in order to surmount the elevation from the Neponsett Marshes to the summit of the dividing ground, which separates the waters of the Massachusetts and Narragansett Bays,) in preference to an inclined plane with stationary power, which, else, had been inevitable—as well as from the measures which had been duly taken to procure a timely supply of Iron Rails from England—that the portion of twelve to thirteen miles between the Neponsett Marches and Boston might be opened for travelling during the past fall;" that the final location of an additional portion, extending for about thirteen miles further southward, from the summit towards Providence, (and to within about eight miles of that City,) was in progress, and about to be placed under contract; and that the remaining portion of the Road could and would be located, when further surveys had determined whether the preference were due to the direct route to *India Point*, or to that leading through Patucket to Providence. It was also stated, that the contracts which had been entered into were at less than the estimated cost, and that the actual cost of the graduation and masonry of the first division of the Road, or that extending to Sharon, and including by far the most expensive portion of the work, would not, in all probability, exceed that which had been originally anticipated—as was exhibited in the first Annual Report which I had the honor to submit to you.

Such was the condition of the work, and such the expectations entertained a year since. It is gratifying to be able to state, as it has been to you, and must be encouraging to the Stockholders to know, that in no essential particular have these expectations been disappointed. The formation of the road-bed, which includes the excavation, embankment and masonry, throughout the first twenty-two sections, has progressed, as was anticipated and the completion of the same was effected from Roxbury, through the Neponsett Marshes, within the time contemplated. The portion between Sharon and Attleborough, extending to within eight miles of Providence, was duly located, placed under contract, and has since been as rapidly progressing towards completion as is desired; and the remainder, between Attleborough and Providence, being located after the most careful examinations and surveys, (as will appear by the annexed Report of Assistant Engineer, E. S. Chesbrough,) is in the progress of construction to such extent as is expedient, till the question shall be decided whether to terminate the Railroad on the Massachusetts shore, opposite India Point, in the City of Providence, or, availing of the privilege which has recently been granted by the Legislature of Rhode Island, to cross the Blackstone River, and extend the road into and through the City of Providence.

The report of the Committee appointed by your Board in September last, "to make application to the Legislature of the State of Rhode Island, to enter and pass into said State with the Railroad, in such place as may be thought expedient," together with the charter which was eventually granted on the application of said Committee, is herewith submitted; and I would only add, in relation to the subject of the *southern terminus* of the Railroad, that while the privilege accorded was at least so far desirable that we should not be restricted to a termination of the Road on lands to which a price might be affixed, in proportion to their enhanced value, from the necessities of the Corporation, the terms proposed to your Agent, by the proprietor of those lands on the Massachusetts shore, (as you have already been apprized,) seem to be not only reasonable, but liberal on his part; and as those lands will, at least for the present, afford ample accommodation to the trade of the Railroad, it remains optional with us, and I should say much dependent on the cost of like accommodation in the City of Providence, whether or not the privilege of entering the State of Rhode Island shall be availed of. The intercourse between Boston and Providence, doubtless, will be the more facilitated the nearer the Railroad shall approach the centre of the latter City; but, terminating even in its vicinity, opposite India Point, it would still afford the most convenient avenue, and would, in consequence, command the travel between these Cities.

The main object of your Railroad, that of effectuating the most safe, cheap, and expeditious transit of persons and merchandize between *Boston and New-York*, will, however, it is conceived, be, perhaps as fully accomplished in the one case as in the other. The Committee will, however, continue diligently such inquiries and negotiations as will in due time enable them, as empowered by your Board, "to select a south-western termination of the Railroad;" and, from the easy accomplishment of all parts of the work in the vicinity of Providence, the final use and completion of the Railroad will not have been delayed by the time consumed in making this selection.

The duties of a similar nature which were assigned by your Board to a special Committee, consisting as in relation to the southern terminus, of two Directors and the Agent, who were empowered "to select a depot in the City of Boston, and to purchase such lands as they might think the interests of the Corporation would require," were, after much negotiation, satisfactorily closed; and a report of their proceedings was submitted to and accepted by your Board, on the 7th September last.

They were fortunate enough to secure such a location of the Company's depot, that the Railroad will terminate "on the lands next south of the City's lands, at the south-west corner of the Common,"—a locality which it is believed all conversant with the subject concur in the opinion, combines sufficient advantages to entitle it to the preference which it received from the Committee. To attain all the advantages, however, which it was the object of the Committee should accrue to the Corporation, they extended their purchases so as to include thirteen different estates, containing about one hundred and thirty-two thousand square feet of land, with the right, as is contended, to form an additional quantity, by filling up adjoining flats to the extent of, say, seventy-five thousand feet—or the purchases of the Committee cover in all upwards of four and half acres; for which was paid the sum of $92,110 67.

The object in making our purchases so extensive, was, that we were not aware precisely what lands might be wanted, and we wished to secure the benefit of obtaining them at a reasonable price, before it was generally known that we had decided upon this location. We had, in fact, decided upon it before we made any purchases, being satisfied that it was preferable, as a termination of the Road, to any other we could procure; and though it occurred to us that we should probably be able to dispose eventually of a portion of these lands, at an advanced price, yet this would not have influenced us to fix upon this location, had we not been convinced of its superior advantages, on the ground of public convenience and accommodation. Under these circumstances, we consider it was our duty to have availed of the opportunity to make these purchases for the benefit of the Stockholders; so as to be able to reduce the cost of what we should retain to a trifling sum, by the sale of the residue. The same motives influenced us to make a purchase of several estates in Roxbury, through some of which our Road passed in such manner as to occasion great injury, and to give the owners apparently a large claim against us for damages. These purchases include about six acres of land, a rope-walk, and five dwelling houses, and amount to about $17,000. They may be sold, we think, at little or no loss, and perhaps to some profit.

We also purchased a mill in Sharon, which was essentially injured by our Road passing near it, but the site for it will be wanted by the Corporation for work-shops.

The formation of the road-bed across the "Full and Empty Basins" of the Boston Water Power Company, comprising what is termed the City Division of the Railroad, and extending from the Company's depot in the

City of Boston, to Roxbury, (a distance of one and three quarter miles,) was begun so soon as the negotiations for land in the City of Boston had terminated—a decision on which point, as the Board is aware, was essential to determine the direction (or *location*) of the Railroad from Roxbury towards Boston,—the delay consequent on which alone prevented the entire completion of the City Division during the past year. This portion, like others, has, however, steadily progressed, and is now ready for use, and like all the other sections, has been graduated for a double railway, the road-bed, in general, being formed similarly to that over the *Fowl Meadows*, (Neponsett Marshes,) by excavations from the adjoining marsh. Instances occur where piling has been necessary to insure stability; but in such cases, to prevent decay and render the road-bed permanent, the piles are cut off below the surface of the mud, or water, (as the case may be,) on which rough masonry has been constructed to the level of the road-bed; or, where the level of the road-bed was too elevated above that of the Basin, for this mode of construction, to prevent the decay of the piles and to sustain them laterally, they have been covered by an embankment of the soil from the adjoining marshes.

This has proved to be comparatively a difficult and expensive division of the Road, although not more so than had been anticipated; but it is at length completed, and as the Stockholders, ere this Report shall have been submitted to them, can testify, it now affords a permanent avenue over the Full and Empty Basins between the City of Boston and Roxbury. From this latter point, as has already been stated, the road-bed had for some months past been graded to the township of Canton, beyond the Neponsett Marshes, and a single track of rail-way is now ready for use from the Company's depot in Boston for the distance of eleven and a half miles towards Providence. That this was not in readiness, as had been anticipated, during the year 1833, however immaterial it has proved to be, (for reasons which will be found, in my opinion, satisfactory, as stated in the subjoined letter from the Agent to a Director in New-York,) I will merely remind you, was because of the delay in the arrival of the iron rails, on which we are dependant for a supply from Great Britain, and because of the late period of the year when the negotiations for land in the City of Boston terminated.

Touching the supply of iron rails, the orders for which have since been issued by me, on the authority of your Board, (as will appear by the subjoined correspondence,) I have the satisfaction to say, we have every assurance of the timely and faithful execution of those orders, which require, in all, the delivery during the coming summer, in Boston or Providence, of twenty-five hundred tons. Of this quantity, nine hundred and fifty tons have already been received, and laid down upon the road-bed, and to complete even the single track which has been begun, there will be required the additional quantity of about twelve hundred tons. This estimated quantity presupposes the continuance of the present rail, which, however heavy in comparison with any other rail elsewhere used—for reasons which I had the honor to state to you when I first urged its adoption, and from much reflection on the subject subsequently, (to say nothing of the experience on the Liverpool and Manchester Railroad, which has induced the Directors of that Company, in their last Annual Report, to advert to the necessity of even a heavier rail than that used on their rail-way,) I have no hesitation in recommending to your continued preference. The form and dimensions of this rail have, however, been so fully discussed on former occasions, that it is unnecessary at this time to enlarge upon the subject; and for a knowledge of my views, reference may be had to my several Reports hereto annexed, with my correspondence with our Agents in Great Britain. Suffice it, that I am aware of no exception to this rail but its weight and consequent expense, which should be obviated in the fact that it has *but the requisite strength*, and that the greater perfection of the rail-way, consequent on the use of such a rail, will more than compensate for the increased cost, which is only to be avoided by the substitution of an inferior article. It may, however, be well to remind the Board, and through them the Stockholders, that even with the use of this rail, and with all its attendant advantages, we continue to be confident that the actual cost of the Railroad will hardly, if at all, exceed that which was originally estimated; and that the cost of the *rail-way* itself, (as will appear by statements appended to this Report,) will fall considerably within my original estimate—the causes of which reduced cost are satisfactorily explained in the substitution of wooden sleepers for the stone blocks, which, prior to the commencement of the work, it had been supposed would be preferred.

With the authority of your Board, I should, therefore, take an early opportunity to extend existing orders for rails, so as to insure a timely supply during the current season of the residue, which will, ere long, be wanted to complete the single rail-way, with occasional passing places, throughout the route from Boston to Providence. It is hoped and believed that on or before the next annual meeting of the Stockholders, I shall have the satisfaction to announce to you the completion of the Railroad, in so far that its use may be availed of for the transportation of passengers and goods, between those cities. When this desirable result shall have obtained, a very important link in the chain of inland communication, which is to connect our Atlantic Cities, will have been supplied; and the certain and increasing revenue which must accrue, will, I feel confident, at least equal the most sanguine expectations of the Stockholders.

It is quite impossible, and the attempt would seem futile, to estimate with precision the amount of trade which in future years, with all the increased facilities of intercommunication between the great emporiums of the commerce of our country, shall seek the natural channel to be afforded by your Road between Boston and the extensive territory east of it, and the City of New-York; and we should, therefore, in preference, present the fact that *the existing trade* will amply compensate the enterprising projectors of the Boston and Providence Railroad, and that *it cannot be diverted elsewhere.*

Pending the completion of this railroad, an interesting question will suggest itself to the proprietors if they may not *now* begin to realize a return on their invested capital, from the opening to the public the use of that portion of the road which, as has been stated, has already been completed. I am quite aware of the practice in similar cases, and the general impression that this practice is profitable; yet my experience leads me to doubt the accuracy of this conclusion. Crowds doubtless do, and would probably continue to, as curiosity might dictate, occasionally throng the railroad; but, however, at such times, we should enjoy an *active*, I apprehend, without the impulse of business to attract them, it would prove to be a very *fluctuating* trade; and, under such circumstances, I am satisfied the result would be by no means profitable. I do not mean to say that in this I cannot be mistaken, neither that the experiment may not be worthy your consideration; but, entertaining the opinions which I have expressed, I attach the more importance to a project, which, if assented to, would at an early day, in connexion with the turnpike, bring into certain and more steady, and, therefore, more profitable action, a portion of the railroad. I allude to the construction of a *branch*, which, diverging from the main stem, about eight and three quarter miles from the Company's depot in Boston, would afford a railway communication between Boston and and the flourishing village of Dedham—a charter for which having, on the application of this corporation, been granted by the General Court of Massachusetts, at its last session, the requisite surveys have, as required by your order of April 14th, 1834, been subsequently made under my direction, by Assistant Engineer Barney, to whom that duty was assigned by me. His report, with the drawing illustrative of the same, and an approximate estimate of the cost, is hereto appended; from which it will be seen, that the length of this branch is but two and one-third miles, the inclinations sufficiently favorable for the use of locomotive engines, and that the cost of constructing the same with a single railway, in the manner in which I should propose to build it, will be about $30,000.

If commenced with all convenient despatch and prosecuted vigorously, it may be entirely completed in all the coming month of September.

I subjoin the communications which I have received from those gentlemen resident in Dedham, and conversant with the intercourse which now exists, from different sources, between that place and Boston, from which it would appear that, even after the completion of the main stem, the trade of this branch will in all probability prove lucrative. As the rails shall continue to arrive from England, (and we are almost in daily expectation of a further supply,) they will be laid down with all practicable despatch, and the railway extended beyond the Neponsett Meadows, to its intersection with the county road in Canton, in the vicinity of the Stone Factory, on the eighteenth section, (fifteen and one quarter miles from Boston;) to which point the road bed is now prepared for the reception of the rails. It may then become a question, if the railroad may not thence be profitably used for the accommodation of the south-eastern portion of the State, in its intercourse with Boston, including the travelling from Taunton, Fall River, New Bedford, &c.; and if, in addition to this, the public stages which now pursue the turnpike between Boston and Providence, may not, in preference, travel the road through Attleborough, Foxborough, Sharon, to Canton, and thence avail of the railroad to Boston. This, I am inclined to think, will be found by the proprietors of public coaches expedient, and whenever it shall be, we shall be—as we are at this present—prepared with railway carriages, and the necessary moving power to accommodate the public.

The eighteenth and nineteenth sections, which together include a distance of two and one quarter miles, it is hoped will be graduated, and the construction of the Canton Viaduct, which intervenes between these sections, be completed in all the current year; and, as the Board is aware, it was always apparent from the nature and extent of the excavations and embankments on these sections, and the character of the intervening structure, that portion of the road must necessarily be the last completed.

The character of the Canton Viaduct, and the terms of the contract for the construction of the same, will be seen on reference to a copy of the contract.

From the end of the nineteenth section (sixteen miles from Boston,) to the vicinity of India Bridge, (in or opposite Providence, where, for the present, we will suppose the railroad to terminate—including a distance of twenty-five miles—as is exhibited on the profiles shewing the monthly progress on all parts of the work, much of the road-bed has already been graded; and the whole of it will (with the exception of the thirty-seventh section, the contract for which provides that it be done by the month of November,) certainly

be during the coming autumn; and measures having been taken to obtain not only the requisite supply of rails, but all the materials required for the railway, the operation of laying the rails will also be continued, between the eighteenth section and Providence, with all practicable despatch, when from time to time the rails shall arrive, and this portion of the road-bed be ready for their reception. In fine, I repeat with confidence my belief that the use of the railroad, through its whole extent, will not be postponed beyond the return of the next annual meeting of the stockholders, or at farthest at a very early day subsequently.

All diligence shall meanwhile be practised, to perfect the moving power and the machinery appertinent, and to place all parts of the work in a condition to be able to transport with celerity and *safety*. The annexed return of Mr. Gibbs, the assistant superintendent of contractors, who is also charged with the superintendence of the moving power, enumerates fourteen passenger cars, which have already been provided—eight of which were built by the Company at their depot in Boston; as well as a partial supply of burthen cars. The number of both will of course be increased with reference to our future exigencies.

The following is a general abstract of all my disbursements in the service of the Company, from the commencement of my connection with it up to the expiration of the last quarter, ending March 31st, the vouchers for which have been submitted to, and passed to my credit, by the treasurer.

General abstract of disbursements on account of purchases and expenditures, made by William Gibbs McNeill, Agent and Engineer of the Boston and Providence Railroad Company, as per vouchers rendered to the Treasurer, up to March 31, 1834.

Nature of Disbursements.	*Purchase.* Dols. Cts.	*Expendit'e.* Dolls. Cts.	*Total.* Dolls. Cts.
Graduation - - -	5,343 87	173,261 88	178,605 75
Railway - - - -	2,274 90	7,400 00	9,674 90
Lumber - - - -	22,453 32	2,237 89	24,691 21
Land - - - - -	40,993 68		40,993 68
Engineer department	750 38	33,031 52	33,781 90
Locomotive and Cars	4,221 57	2,758 44	6,980 01
Quarry in Canton -	1,000 00	4,544 38	5,544 38
Bridges - - - -		6,345 77	6,345 77
Contingencies - -	351 56	970 45	1,322 01
Teaming - - - -		2,258 27	2,258 27
Fencing - - - -	342 58	1,396 07	1,738 65
Masonry - - - -		16,800 78	16,800 78
Total - - -	$77,731 86	251,005 45	328,737 31

For a minute statement of the items of the several objects above enumerated, to which the funds entrusted to me have been applied, and for the system of accountability which has been adopted and rigidly adhered to, I beg to refer to the journal of proceedings of the engineer department of the Company, the leger, requisition book, &c., among the archives of the Company. They are in charge of Wm. Raymond Lee, who has ably and most faithfully assisted me in all that relates to the various disbursements on account of construction; to whom, as well as to the numerous other gentlemen with whom I have been associated in your service, I take pleasure in acknowledging my obligations for their cheerful and unremitted exertions, to aid me to promote the interests of those who have honored me with their confidence.

To meet the current expenses, and those anticipated prior to the annual meeting of the stockholders, the residue of the capital of the corporation will be required, which if assessed in monthly instalments, it is thought will provide the necessary funds. Which is respectfully submitted, by, Gentlemen, your obedient servant,

WM. GIBBS MCNEILL,
Agent and Engineer of the Company.

The following extract from the written contract, will show the character of the Canton Viaduct on the Boston and Providence Railroad:

It is understood that the said viaduct shall commence at a point 10.5 feet north-east of station marked 670, of the centre line of the Boston and Providence Railroad, and extend 613.5 feet on said centre line, to a point 3 feet south-west of station marked 676, crossing the mill-pond of the Stone Factory, so called: that the said viaduct shall terminate at each end by an abutment and circular wing walls: that the basement wall shall, in every part, be laid on a solid foundation—shall extend entirely across the base of the structure, and project from 1 to 2 feet beyond the exterior face of the superstructure, as may be directed.

The said basement wall shall be constructed of the best dry masonry, and the stone of such dimensions as shall be approved of by the agent or his assistant; the said basement wall shall in every part commence at least 3 feet below the surface of the earth, except where solid rock shall be encountered, and shall be raised to such elevation as the agent or his assistant may direct.

The superstructure shall consist of two walls, extending the entire length of the viaduct, connected at intervals of 27½ feet by buttresses of 15½ feet thick, extending transversely across the walls, and projecting 4 feet beyond their faces—the main walls to be 4 feet thick, 4½ feet below the grade of the road at all points, and to have a battre on their exterior faces of 1 foot in 48 feet, or 1 inch to 4 feet—the interior faces to be perpendicular, and to have a clear of 4 feet; the exterior faces of the abutments and buttresses to have a battre conforming to the faces of the walls, viz., 1 foot to 48 feet.

There shall be one arch for a road-way, situated near station marked 674, the span of which shall be 22 feet—(the distance between the buttresses at this point shall be 26 feet, to conform thereto)—and seven arches of 8 feet span each, for the passage of the water in the pond. The impost of the arch over the road-way shall be at least 12 feet from the surface of the road—the arch semi-circular, and the voussoirs or ring stones 2 feet long, and not less than 15 inches thick; the intrados and vault of the arch to have the same character, and dressed to conform in appearance to the exterior surface of the walls; each arch over the pond to be situated midway between two buttresses—the imposts to be at least 6 feet above the surface of the water when the pond is full; the voussoirs to be 18 inches long, and not less than 12 inches thick, and the intrados and vaults of the same character as that of the road-way.

The entire superstructure shall be constructed of the best range work, laid in mortar; the beds, ends, and one inch round the faces of the stones, dressed; each and every stone in a range, shall have an equable bearing, and shall not have a rise of less than 16 inches; the stones in each course shall have a rise equal to the face stone of that course; all inequalities or cavities, formed by the irregular ends of the large stones, to be filled with small stone and mortar, and made solid. The ranges in no instance to be broken between the buttresses, but shall extend so as to include one buttress at least. There shall be a sufficient number of headers in each range to secure the stability of the work, and placed at such intervals as the agent or his assistant shall direct; and stone not less than 7 feet in length, and of sufficient thickness, shall be placed at intervals between the buttresses, as binders, to unite the two main walls, and projecting into the wall 18 inches beyond the interior faces.

The exterior surface of the abutments and wing walls, shall be similar to the exterior surface of the main walls of the superstructure, and the stone forming the faces of the same laid in mortar; the stone of the interior of the wing walls shall be laid dry—but in every other respect shall conform to the general character of the superstructure, viz., of the best range work, each stone having a solid bed and bearing, and of dimensions suitable to range with the stone forming the face of the course.

The buttress shall be carried up to within 7 feet of the grade of the road, where an impost projecting about 6 inches, shall be laid, and arches, forming an arc of a circle, with verse sines of 4 feet each, shall be sprung up from buttress to buttress, the voussoirs of which shall be 18 inches through, and the character of the work similar in all respects to the arch over the road-way.

The entire superstructure to be surmounted by a coping 18 inches thick, projecting one foot beyond the exterior faces of the ring stones of the arches, and formed of stone of such dimensions as the agent and engineer or his assistant may direct, and the seams of the coping stones shall be filled and closed with such cement as shall be durable and impervious to water.

In the Journal of last week it was stated that Mr. Burden's engine was built under the direction of Mr. Snodgrass, of Glasgow. This is not exactly correct. He had the direction of the cast iron packing, and proposed an alteration in the valve; but, otherwise, it was built under the direction of Mr. T. B. Stillman, of Novelty Works, in this city.

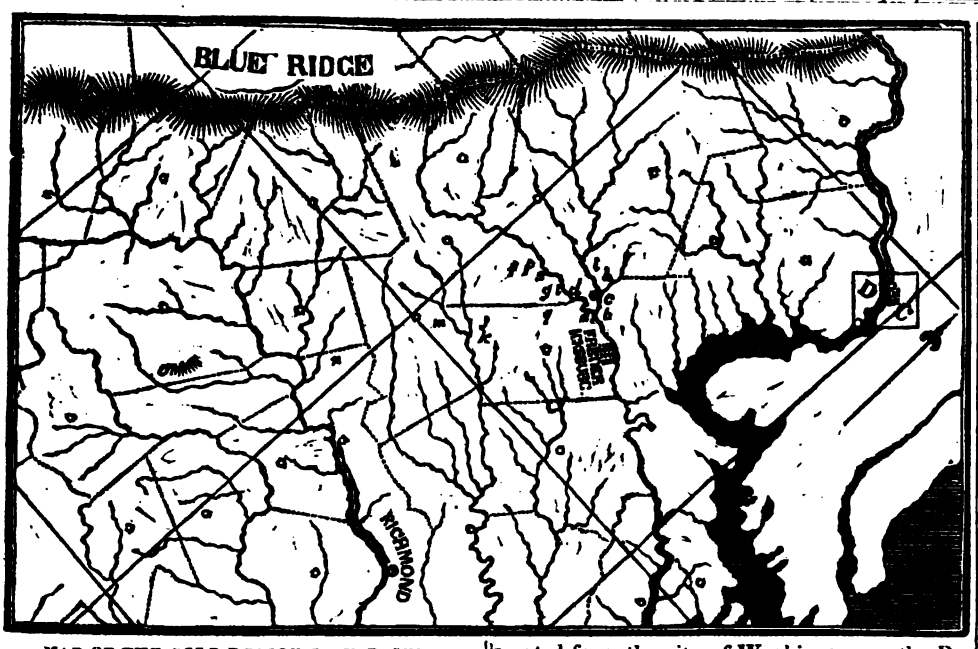
ON OILING LOCKS, DOOR LATCHES, &c.—We have somewhere read of a gentleman who was in the habit of taking a nap sometime during the day; but near his couch hung a door on rusty hinges, which grated so harshly when moved as always to break his slumbers; and it was remarked that the labor of one minute with a feather dipped in oil, would have prevented the disturbance. He then might have quietly taken his *siesta*. It was too trifling a concern, however, to require immediate attention: it could be done at any time; and why should he get up and do it then? Like a philosopher, he would not move without a sufficient motive; and week after week, and year after year, he was reminded of Milton's sublime conception of the doors of another region.

We have been in the habit of frequently oiling the locks and latches of our doors, not only as a matter of comfort and convenience but of strict economy—because we are persuaded they will last much longer when they are shut and opened without strain or jar. Owing to forgetfulness of the time when it was last done, however, the latches on two doors, when pushed to, had refused to rise, and consequently would neither shut closely nor fasten. It had become necessary to raise them by hand. At first we concluded that some roughness, occasioned by wearing, which we could not well explain, was the cause of the difficulty, and we thought of using a fine file to remove it; but happily we first tried the experiment of an oiled feather, and we were delighted to find every obstruction vanish: all moved like clock-work.

A wooden latch was the fastening for a door exposed to the weather; and it had lately been refitted so as to rise with great facility. A single shower of rain, however, put a stop to the movement; and it would not shut without the assistance of the hand. We therefore applied a few drops of olive oil—the spell was destroyed; and though it has rained much since that time, the latch rises and fastens without the least trouble.

Who of our readers have grating doors, or locks and latches that have become refractory? In such cases we should point to the oil flask.

LEAD MINES.—No lead mines in the world are supposed to be richer or more abundant than those of Missouri, on the borders of the Mississippi. The ore is often found within two feet of the surface of the ground, in detached masses, weighing from one to eighteen hundred pounds. The annual produce is calculated to be three millions of pounds.



MAP OF THE GOLD REGION OF VIRGINIA.
[*From a Correspondent.*]

REFERENCES.

a, United States Gold Mine,		Spotsylvania county.	
b, Rappahannock	"	Stafford	"
c, Rattlesnake	"	do.	"
d, Culpepper	"	Culpepper	"
e, Millbank	"	do.	"
f, Virginia	"	Orange	"
g, Vaucluse	"	do,	"
h, Liberty	"	Faquier	"
i, Union	"	do.	"
j, Johnson's	"	Spotsylvania	"
k, Dixon's	"	do.	"
l, Mellville	"	Orange	"
m, Tinder's	"	Louisa	"
n, Goochland	"	Goochland	"
o, Booker's Willis mt	"	Buckingham	"
p, J. Payne's	"	Orange	"
q, Greenwood	"	Spotsylvania	"

This map exhibits a condensed view of the gold region of Virginia, and is taken from a larger one belonging to Mr. F. Shepherd, of New-Haven, who has spent some months in surveying and exploring this interesting portion of our country. We say interesting, because the amount of gold annually obtained in the United States, is estimated in millions of dollars; and this amount is rapidly increasing when, comparatively speaking, the surface only of the ground has been disturbed in getting this precious metal.

We learn from Mr. S. that the undue excitement which the first discovery of gold creates in the minds of all classes, is now at an end in Virginia, and the business of getting gold is assuming a settled and systematic character. The farmer now goes on with his farming, and the experienced miner with his mining, and in this way each is mutually an aid to the other.

As to the richness of the Virginia ores, Mr. S. has given us full satisfaction, by simply pounding them in a mortar and washing away the sand in our presence, when, to our surprise, a large proportion of metallic gold appeared in numerous and beautiful grains, and this, too, from specimens which had no gold visible on the outside.

The following is an extract from the report of Mr. Shepherd:

"I am decidedly of opinion that Virginia is destined, sooner or later, to become a rich and prosperous mining country; that whenever skill and capital shall be judiciously applied, (in the language of an able and beautiful writer,) she will one day be to the country what Cornwall is to England, the seat of prodigious industry, and the source of individual and national wealth."

In coming to this conclusion I do not lose sight of the great natural advantages which Virginia possesses over other mining districts in the United States, and throughout the world. It will be seen by the map that by a little more than half a day's ride, any one can be transported from the city of Washington on the Potomac, to the gold mines on the Rappahannoc, on the banks of a beautiful river made navigable by locks and dams, a distance of ten miles to tide-water and steamboat navigation, commencing at Fredericksburg, which is a busy inland town, at all seasons supplying a plentiful market. Add to this the very low price of provisions and labor, the vast abundance of wood and timber, the great number of water powers easily created upon the numerous streams, the peculiarity of the soil and earth as affording facilities for excavation, (since steam is now applied to all kinds of digging,) and finally the beautiful developement of the rich gold veins, said by those who have been observers in both countries, by far to excel Mexico, South America, or even Russia, so much celebrated of late for her gold mines. These veins are composed of quartz commonly called white flint, from one to four feet in thickness, generally perpendicular in the earth like a wall, supported on both sides by soft talcose slate, and extend from the surface to an unknown depth. It is not uncommon to find gold in the broken fragments of the veins at the surface, and it has also been found at the depth of 160 feet increasingly rich. The gold district lies in that part of Virginia between the tide-water and Blue Ridge, where the atmosphere is dry and exhilerating, the climate mild and agreeable, the water well tasted and pure, the inhabitants of that class so long and so justly famed for their hospitality and refinement, and for whose convenience, the great National or Southern Railroad is about to pass by them as it were at their thresholds.

Still, with all these natural and extraordinary advantages, I feel it my duty, continues Mr. Shepherd, to give my friends and fellow-citizens of New-England, a few words of advice by way of caution. That there is a very large amount of gold in the great State of Virginia, and that this large amount of gold may be extracted so as to afford a large profit, is clear to a demonstration; and I believe that this section of our country is worthy the attention of northern enterprise and capital. Yet it frequently happens that many persons have an idea that wherever gold is discovered, if they can but get possession of the lands, no matter at what price, their fortune is made for a certainty. This foolish impression has ruined many a man. The temptation is so great that where a person wishes to sell his land as gold land, and cannot find gold upon it, in order to effect his object, he will sometimes bring gold sands and ores from a distance, and bury them upon his own grounds, which of course the purchaser finds out to his sorrow when too late. Again, some persons, on finding a few grains of gold, suppose that if they dig deep they will surely find the precious metal in masses and blocks. It is needless to add that such visionary day-dreams are rarely realized—still many are sanguine enough to pursue the chance with great ardor.

To those persons who engage in this business for the purpose of speculation, I would say that they will only be benefitted at the expense of others, and will injure the mining interest of the country more in a few days than they can possibly repair in many years.

Finally, persons ought not to engage in this business without previous skill and experience. It is obviously unsafe for them to do so; and here is the cause of so many failures of companies and individuals. Gold mining is as much an art or trade as iron mining. What company of farmers would undertake of themselves to get iron from the ore? And what would be the probable result of such an undertaking? What would be the result if this same company of farmers should undertake to work the ores of zinc, so rich and abundant in this country? I have no doubt you anticipate the result correctly; and the same result is to be expected in their undertaking to get gold. Some persons in their ignorance suppose that if they expend a large amount, or venture a large sum, that they shall certainly realize something in return. Such visionary men lose their all, generally; whereas, in the hands of a discreet and experienced man, every cent of that money, like the well directed blows of the axeman, would be turned to a good account; and instead of a loss he would reap a reward of an hundred fold. In proof of this I have known a man to expend ten hundred dollars and get ten thousand dollars of gold for his reward, and from an examination of his lands, believe that he might labor all his life in the same prudent way, and with the same good success. Again I have known another man in the same situation precisely, expend the same sum and get nothing but a load of debt upon his shoulders instead of gold. Now will you say that these mines ought not to be worked? No, you will say let them be worked by honest, experienced and prudent men. Let this be done, and the capitalist will find his money profitably employed, and the millions of gold in Virginia will be made to circulate and gladden the hearts of millions of the human race now pining in want and "perishing for lack of knowledge."

HEAT.—It has been said by an astronomer, that a globe of red hot iron as large as our earth would scarcely cool in 50,000 years. If this be true, then the comet which appeared in 1680, cooling a hundred times as fast as the hot iron, its heat being actually 2,060 times greater, would take a million of years to become perfectly cool, admitting it to possess a quantity of matter equal to that constituting this earth. That the comet alluded to was solid, cannot be doubted, as Sir Isaac Newton clearly demonstrated that in its passage through the neighborhood of the sun, it must have been dissipated, had it not been of solid compact substance. In its perihelion, Dec. 8, it was observed to be to the distance of the earth from the sun as 6 to 100. The sun's heat in the comet, at that time, was to the heat with us at midsummer as 1,000,000 to 36, or as 28,000 to 1. Had the comet consisted of exhalations of the sun, as some astronomers of the day intimated, it must have been completely dissipated; for the heat of the sun, it is generally allowed, is as the density of his rays, or in other words, reciprocally as the squares of the distances of places from the sun.—[Scientific Tracts.]

LIGHT.—Dr. Nieuwentyt has computed that, in a second, there flows 418,660,000,000,000,000,000,000,000,000,000,000,000,000,000,000 particles of light out of a burning candle, which number contains, at least, 6,337,342,000,000 times the number of grains of sand in the whole earth, supposing every cubic inch of the earth to contain a million of grains.

AGRICULTURE, &c.

SILK MANUFACTURE AND MORUS MULTICAULIS.—About the year 1824, M. Perottet, a distinguished travelling botanist, introduced this valuable plant into France. He procured two specimens at Manilla, the capital of the Phillipine Isles, and carried them to the Isle of Bourbon, and from thence into Cayenne and France. Now there are millions in Europe, Asia, and America growing from those two plants; and in a few years, there will be additional millions. From an article in the New-England Farmer, by Wm. Kenrick, we extract the following:

The sudden and extraordinary extension of the silk manufactures, both in France and in England, during the last ten years, has been mainly ascribed to the machine invented in France by M. Jacquard; and the powerful impulse thus given has been assigned to the *Jacquard Loom*. This loom is stated to perform all those labors which had heretofore been exclusively confined to the most skilful hands, with important economy of time and labor in the preliminary steps, and is so decidedly superior to all other looms, for all the curious varieties of figure-silk weaving, that it has superseded them all, both throughout France and England.

Those resources, the millions we now annually expend for silks, the productions of foreign industry, and of foreign policy, draining our country of its treasures — those vast sums should be preserved to our citizens. This industry and resource of wealth must not be compromised nor bartered, nor sacrificed to rival and particular interests, or to the interests of rival nations. The cultivation of silk being in no wise exclusive, but a great and general interest, alike adapted to every region of our country, from the north to the extreme scuth; from the Atlantic to our territories which are bounded on the Pacific ocean—it demands that equal share of protection which has been bestowed on cotton, on iron, on tobacco, and on the productions of the sugar cane. But the encouragement of the cultivation of the Mulberry, and of the growth of silk, *in the United States, as a resource of Agriculture*, seems not to have formed any part whatever of what is called the "The American System."

The enterprise, the fertile invention, the noble efforts of individual exertion, have already accomplished much, but the field is very broad and of vast extent; much yet remains to be done. That industry which still slumbers: that portion, which unawakened is now lost, being alone more than sufficient to accomplish all, if once aroused and rightly directed—more than sufficient to recover again those very considerable sums, the millions so prodigally expended, with interest an hundred fold.

By those unceasing toils and mighty efforts, and matchless labors, for which our people are so distinguished, the millions thus recovered will not only be their just reward, but will add to the substantial wealth of the nation, and to the glory of the whole Republic. * * *

In our own country there may yet perhaps be some who would advance the question whether this most desirable plant will endure the winters of northern climates. At New-York, on Long Island, this mulberry has sustained, unprotected, the rigors of seven winters, as I am informed, and the extraordinary winter of 1831-2, which destroyed so many trees hitherto deemed hardy even to the root.

I have indeed sanguine expectations, that the *Morus Multicaulis* may prove as hardy in our climate, as the peach tree, which was originally from Persia, or the cherry tree, when once their roots have become established. Its vegetation being rapid and luxuriant, and prolonged to a later period in autumn than that of most other trees, or till the tender and yet vegetating tips of the twigs are checked by the frost, these extreme ends will generally be lost, as they always are of the common White Mulberry when young.

In our climate, there are many kinds of trees which need protection during the first winter, though they may never require any afterwards. Such are the young seedling plants of but a single summer's growth, of the *Cherry, Plum, Pear*, the *Quince*, and the *White Mulberry*, &c. all which require to be carefully, compactly placed in cellars; during winter, their roots buried in soil; or occasionally, for protection, may be laid in out of doors compactly and in a slanting position, their bodies being in part protected by soil. For all these species are liable to be killed occasionally to the root by the first winter, or to be utterly destroyed by being thrown out by frost, yet in the second winter it is far otherwise; their roots becoming strong and firmly established, the well ripened wood of the second year, and the wood of two years growth becomes indestructible by any but very extraordinary winters. I have taken the same precautionary measures with the young and tender plants of this Mulberry, so valuable—the layers of but a single summer's growth, which are separated in autumn.

I will offer some further evidence of the hardihood of this plant. But the experiments which are now in progress elsewhere, as well as here, on a more extensive scale, will, as I trust, soon enable us to put this subject more fully at rest.

Very late in the spring of 1833, more than an hundred young trees of the Morus Multicaulis were set out on the place of S. V. S. Wilder, Esq. in Bolton, Worcester county. The soil springy, the exposition cold, and sloping to the north; Mr. Joseph Breck, a distinguished botanist of Lancaster, the town adjoining, having especial charge of these plants, has lately very critically examined them. Thus unfavorably situated, and unprotected, they have borne the last winter without injury, except only the very tips of the twigs. Mr. Breck is persuaded that they are even hardier than the common White Mulberry, since some hundred of the latter, which stood very near, were killed half way down to the ground by this same winter.

I have just received a letter, of the 30th ult., from John Gordon, Esq. a public spirited gentleman, who has, during the last year, made trial of the *Morus Multicaulis*, at Hampstead, N. H. These plants grew well during the summer and have borne well the winter, and are now luxuriantly vegetating to within two or three inches of the tips. Mr. Gordon is now making trial of the White Mulberry, and the *Morus Multicaulis*, in the city of Portland, in exposed situations, also of the silk worm, confident they will all succeed well, and that the culture of silk will answer well in that climate.

Although the Mulberry flourishes most luxuriantly in a moist and rich soil, and protected situation, yet the leaves in such soils and situations are more crude, and not of a quality so nourishing. Besides, the growth of the tree in such situations being much more rapid, the wood is consequently more tender and more liable in northern climates to be killed by winter; and authors seem to be agreed, that the proper soils for the Mulberry tree are dry sandy, or stony; and trees on dry, light soils, and situated on the open plains, and on hills the most exposed to cold winds, will generally be found to suffer least of all from the effects of winter. Such appears to have been the case in 1831-2; the ravages of that destructive winter seem to have been generally confined to trees growing in particular situations and soils. Even delicate trees and plants, the natives of more southern climes, become more hardy, and capable of supporting the northern winters. by being planted on the north side of buildings and fences, and in their shade. The exposure to the most intense degree of cold, in such situations, is more than compensated by the protection which is thus afforded to the plants during winter, from the pernicious and far more destructive rays of the sun.

The prediction, in 1830, of the late Dr. Felix Pascalis, that, "after the discovery of *this plant*, a doubt no longer exists, that two crops of silk may be produced in a single season;" this prediction has since been fulfilled—its truth confirmed by experiment—the soil and cultivation, the habitations for the successive generations of insects being yet the same: all thus converted to a double use, and the whole production doubled. It must be obvious, that the actual profit thus augmented must be manifold.

Newton, June 7th 1834.

RUTA BAGA.—The following is an account of the method of cultivating Ruta Baga, adopted by the Rev. Henry Colman, in obtaining a crop for which he received a premium of $20 from the Massachusetts Agricultural Society in the year 1830. From the N. E. Farmer, vol. ix, p. 284.

Gentlemen,—Accompanying this you have the certificates of a crop of Ruta Baga, raised this year on my farm in Lynn. From these it will appear that on an acre, measured by a sworn surveyor, on one side of the field, there were gathered 741 baskets full; and that forty baskets of the above named, weighed at the town scales 2750 lbs. net weight. This, allowing 56 lbs. to a bushel, the standard weight assumed by the Society, would give a crop of 903 bushels to the acre.

The turnips were planted on the 29th of June and 2d of July; about one pound and a half of seed was used for the acre; and they were gathered and stored in cellars and in the barn, in the last part of November.

The ground on which they grew is a good soil, neither wet nor dry, and bore the last year an abundant crop of onions, and corn the year preceding the last. It was well manured at both times, and in fine tilth. It was manured with at least six cords to the acre of barn-manure the last spring, and sowed again to onions; but the seed entirely failing, it was ploughed, harrowed, furrows struck out, and about eight cords of barn-manure spread in the furrows; ploughed again, so as by a back furrow to form a ridge over the manure, and the seed sown with a small drill-harrow on the ridges, making the rows about twenty inches asunder. As soon as the plants were of sufficient size, a drill-harrow, with small shares fixed to it, to cut off all the weeds, was passed through the rows: and the plants thinned with a small weeding-hoe to the distance of about eight inches apart, and the vacant places filled up by transplanting from the supernumerary plants. They were once more harrowed and cleaned, which was a very small labor; and owing to the very unpropitious weather, were not harvested until very late. Some of them were very large; one weighed 15 lbs., and many were nearly as large. The exact expense of cultivating the acre cannot be estimated, as it was intermixed with other farm-work; but the whole, from the sowing to the gathering, was not two-thirds of the labor usually bestowed on planting, cultivating, and gathering an acre of potatoes.

My Swedish Turnips the last year, of which I raised considerable quantities, were fed off to my oxen, dry cows, young stock, and fatting sheep. To the cattle they were of very great advantage; and for feeding sheep, they proved the last year, by an accurate account, worth from ten to twelve and a half cents per bushel.

The man who has the care of my stock, considers them as among the most profitable feed which can be given, either to fatting or to store-cattle. Three years' experiment has increased their value very much for these purposes, in my own estimation.

I am, gentlemen, very respectfully yours,

HENRY COLMAN.

A correspondent in the N. E. Farmer, vol. xi., p. 277, writes thus:

'A wish to have others profit by my experience has induced me to send you, Mr. Editor, half a sheet of remarks on the culture of the Ruta Baga, as a food for domestic animals. I have cultivated from half an acre to three acres

of this root every year for thirteen years in succession, and feel competent to give rules for its culture, and confidence in recommending it as a valuable and profitable crop.

'The soil must be rich and dry; and the more it inclines to a sand loam the better. Clay is the worst, and wet soils will not answer at all.

'*Preparations.*—My general practice has been to manure well a piece of pasture, or clover ley, from which the hay has first been cut, plough it handsomely over, and harrow it well.

'*Sowing, &c.*—I sow in rows, at two and a half or three feet, with a drill-harrow. The sooner the preceding operations succeed each other the better. I have sown broadcast, but the expense of thinning and culture is increased. A man will drill in three or four acres a day. We allow a pound of seed to the acre, though half this, properly distributed, is enough. Sow from the 26th of June to the 10th of July.

'*Culture.* I use a cultivator, that may be graduated to the space between the rows, drawn by a horse, as soon as the plants can be well distinguished. This is repeated in a few days, back and forward, and the implement carried so close to the drills, as to leave only strips of from four to ten inches, which are then thoroughly cleaned with a skim hoe, and the plants thinned to eight and ten inches distance. The cultivator soon follows for a third time, and if necessary, the skim-hoe, when the crop is generally left till harvest; the great aim is to extirpate the weeds, and to do this while they are small.

'Harvesting is postponed as long as the season will permit. The roots are then pulled up, and laid on the ground, the tops of the two rows towards each other. The pullers are followed by a man or boy with a bill-hook, who, with a light blow, cuts the tops as fast as three or four can pull. Three men will in this way harvest, of a good crop, 300 bushels in a day. The tops are gathered into heaps and taken to the yard in carts, daily, for the stock until they are consumed. An acre will give from five to ten cart loads of tops. The roots are piled in the field if dry,—the pits, two or two and a half feet broad, covered with straw and earth, and as cold weather approaches, with manure, to prevent frost. N. B.—With a crowbar make one or more holes on the crown of the pit, which must be left open, to let off the rarefied air and prevent the roots from heating.

'*Use.*—The tops serve for autumn. As soon as the mild weather of spring will justify, I break through the frost, and take the contents of a pit to my barn, and cover the roots with straw or hay. From thence they are fed to my stock, being first chopped up with a *snik*, (Dutch meat-chopper,) or spade. They are excellent for sheep, especially for ewes that have young, and hogs and horses eat them freely. Steamed, they are used in the north of England for horses as a substitute for grain. I have fattened sheep and bullocks upon them with profit. They constitute, particularly from February to June, an excellent culinary vegetable for the table. A bullock will thrive fast upon two bushels a day, and will consume hardly any hay, and requires no drink.

'*Produce and Cost.*—My average crop has been 600 bushels per acre, though others have raised much heavier products. The cost, in manure and labor, when they are secured for winter, has been from two to three cents per bushel.

'N. B.—Cattle or sheep, fattened upon this root, should be kept from eating them for eight or ten days before they are slaughtered, otherwise the meat will have an unpleasant savor.'

J. B.

Dr. M'Kinney's Tour in South Florida.

[For the Quarterly Journal of Agriculture, Mechanics, and Manufactures.]

Mr. Editor,—I was in South Florida part of the months of February and March. The climate is mild as that of the tropics, and the growth of timber and plants very much the same as that in the West Indies. The soil may be divided into the following varieties: 1st, The mangrove and marsh lands. These are alluvions from the rivers, of a deep black mould, and are inundated in the rainy season. It will not, however, be difficult to reclaim them, as a dyke two feet high will be sufficient, and when once made will be easily kept in repair, the banks being permanent, the currents gentle, and the rise of water inconsiderable. The mangrove lands are covered with a thick growth of the mangrove bush, and the marsh lands with a luxuriant crop of tall coarse grass. These lands might be profitably cultivated in sugar, sea island cotton, and rice, and some think that the coffee and chocolate plants may suceeed equally well.

2d, The hammock lands. These are covered with a thick growth of timber, among which the live oak, mastic wild fig, and gum tree, are most conspicuous. The greater part of the timber is valuable in ship-building. The lands are rocky; the soil a light vegetable, mixed with white sand, sea shells, and other marine exuviæ. They are the principal lands yet cultivated, and produce corn, potatoes, turnips, with other culinary vegetables. Several plants of tropical origin are also cultivated, such as the plantain, banana, pine apple, papaya, and a few others: these produce good crops, and ripen perfectly well, although they are among the most delicate of tropical plants. Limes of an excellent quality grow at the mouth of the Miami river. Corn grows the whole year. I saw it ripe, in silk, and sprouting from the ground, in the month of February.

3d, The pine barrens. These occupy the greater part of the arable lands, and afford but a dull prospect for successful cultivation. They are very rocky, and the soil a white sand; the timber is of a stunted growth, but good for ship-building, and it is said by residents that these lands produce better than their appearance would indicate. At present, they afford subsistence to the greater part of the population of Cape Florida, and are even a source of gain to some. The compti, or Florida sago plant, grows in great abundance throughout these barrens; the root of whcih, properly ground and macerated, produces a nutricious and wholesome food; and when carefully prepared, is equal to the best Indian arrowroot, as a substitute for which it now finds a ready market in some of our commercial cities. It is prepared at present by a very rude process, and yields 25 per cent., and would doubtless give more if the method of preparing were neater.

The rivers, although navigable, are short in their course. The Miami is but six miles long, and is navigable for steamboats 4 miles. New river is about fifteen miles long, and is navigable nearly the whole distance. They all terminate in the "great everglade," which is the common source of all the rivers and brooks found in South Florida. This immense marsh includes perhaps four-fifths of all the lands south of 28 degrees. It is covered with coarse tall grass, contains lakes and rivers in its bosom, and beautiful islands of timber are seen to specklo its otherwise unvariegated surface. The soil of these islands is said to be fertile. During the rainy season, boats and canoes navigate this immense morass, and game, fish, and fowl, amply pay the huntsman his labor.

The borders of the everglade are higher than the surrounding lands, hence the water descends with great velocity at the heads of the rivers, affording good sites for water-power machinery; and perhaps, by cutting a canal through this barrier, much good land might be drained in the everglade, and the navigation of the rivers improved. I have seen but few springs; but the river water is pleasant and wholesome, and generally preferred by the inhabitants. Well water is also procured by digging but a few feet.

The Cape Florida settlement is considered very healthy, fevers and catarrhal affections being scarcely known; and, doubtless, if people were well fed and lodged, disease would be less common than at present.

The public is apprized that Dr. Perrine, United States Consul at Campeche, proposed establishing a "tropical plant" nursery at Cape Florida, for the domestication of all tropical exotics useful in the arts, or curious in science. With this object, Dr. Perrine presented a memorial to Congress, on behalf of himself and associates, praying the grant of a tract of land, to be located in South Florida, and to be devoted exclusively to the cultivation of tropical exotics. At the same time, the legislative council of Florida granted an act of incorporation to Dr. Perrine and his associates, as the Florida Tropical Plant Association. Dr. P.'s memorial was referred to a committee which reported favorably thereon, and the report was adopted by the Senate. But owing to the great absorbing question relative to South Carolina Dr. P.'s memorial met the same fate of all other local questions; and it is probable it will meet the same neglect this session as before, owing to the great excitement now existing in both houses of Congress. Notwithstanding the failure of his project before the councils of the nation, Dr. P. continues to persevere in his favorite plan. He is now establishing, "unaided and alone," a nursery of tropical plants at Cape Florida, and has transplanted thither many exotics before unknown in this country. He has devoted for several years the most assiduous attention to the history and mode of cultivation of the many fibrous plants cultivated in tropical latitudes, with the view of transplanting them to his native country.

It is thought by some that South Florida will not suit the growth of tropical vegetation but facts prove it will. Frosts are unknown. The most delicate vegetables grow equally in winter as in summer, and many plants indigenous to the tropics are also indigenous to Cape Florida, among these are several species of agave, (henequen, or Sisal hemp,) and cactus, which I have never seen except in hot climates. But from the impossibility of acquiring lands with secure titles, some time must elapse before Dr. Perrine will be enabled to prosecute with effect his experiments. Lands of government are as yet unsurveyed, and Spanish claims have not been entirely confirmed, so as to leave no doubt of their titles. Would it not be advisable that Congress, at as early an hour as practicable, should bring these lands into market, thereby opening a new source of pecuniary and scientific enterprize to our countrymen?

Princeton, 14th June, 1834.

Remarks.—We learn from a correspondent of the Farmers' Register, that in Middle Florida, "marl is not rare, the whole country being based on a shell rock."

GOLD COINS.—We republish from "Bicknell's Counterfeit Detector," a table of the value of Gold coins, calculated on the basis of the laws lately passed by Congress.

It is however, proper to say, that these tables do not agree with other calculations we have seen—particularly, as to the value of the Sovereign, which Mr. Bicknell's table rates, it is thought too low.—[American.

GOLD COINS.

PREPARED EXPRESSLY FOR "BICKNELL'S REPORTER."

NAMES OF COINS.	Weight dw.	gr.	Present standard d.	c.	m.	Stand. of July 31, 1834. d.	c.	m.
UNITED STATES.								
Eagle, coined before July 31, 1834,	11	6	10			10	66	5
Shares in proportion.								
FOREIGN GOLD.								
AUSTRIAN DOMINIONS.								
Soverain,	3	14	3	17	6	3	37	7
Double Ducat,	4	12	4	29	9	4	58	9
Hungarian, do.	2	5½	2	15	4	2	29	6
BAVARIA.								
Carolin,	6	5½	4	64	6	4	95	7
Max d'or, or Maximilian,	4	4	3	11	1	3	31	8
Ducat,	2	5½	2	13	3	2	27	5
BERNE.								
Ducat,double in proportion,	1	23	1	85	4	1	98	6
Pistole,	4	21	4	26	2	4	54	2
BRAZIL.								
Johannes, ½ in proportion,	18		16			17	06	4
Dobraon,	34	12	30	66	6	32	70	6
Dobra,	18	6	16	22	2	17	39	1
Moidore, ½ in proportion,	6	22	6	14	9	6	55	7
Crusade,		16¼		59	8		63	5
BRUNSWICK.								
Pistole, double in proportion,	4	21½	4	27	1	4	54	8
Ducat,	2	5½	2	09	2	2	23	
COLOGNE.								
Ducat,	2	5½	2	12	5	2	26	7
COLOMBIA.								
Doubloons.	17	9	14	56		15	53	5
DENMARK.								
Ducat, Current,	2		1	70	5	1	81	2
Ducat, Specie,	2	5½	2	12	5	2	26	7
Christian d'or,	4	7	3	77		4	02	1
EAST INDIA.								
Rupee. Bombay, 1818,		11	6	65	4	7	09	6
Rupee of Madras, 1818,	7	12	6	66	7	7	11	
Pagoda, Star,	2	4½	1	69	9	1	79	8
ENGLAND.								
Guinea, half in proportion,	5	8½	4	79	9	5	07	5
Sovereign, do	5	2½	4	57		4	84	6
Seven Shilling Piece,	1	19	1	60		1	69	8
FRANCE.								
Double Louis, coined before 1786,	10	11	9	68	7	9	60	7
Louis, do.	5	5½	4	54	1	4	84	6
Double Louis, coined since 1786,	9	20	8	59		9	15	3
Louis, do. do.	4	22	4	29	5	4	57	6
Double Napoleon, or 40 francs,	8	7	7	23	2	7	70	2
Napoleon, or 20 do.	4	3½	3	61	6	3	85	1
Same as the new Louis Guinea,	5		4	36	2	4	65	5
FRANKFORT ON THE MAIN.								
Ducat,	2	5½	2	13	7	2	27	9
GENEVA.								
Pistole, old,	4	7½	3	73	7	3	98	5
Pistole, new,	3	15½	3	23	2	3	44	4
HAMBURG.								
Ducat, double in proportion	2	5½	2	13	7	2	27	9
GENOA.								
Sequin,	2	5½	2	15	8	2	30	2
HANOVER.								
Double George d'or, single, in proportion,	8	13	7	48	2	7	87	9
Ducat,	2	5½	2	15	4	2	29	6
Gold Florin, double in proportion,	2	2	1	57	6	1	67	
HOLLAND.								
Double Ryder,	12	21	11	44	2	12	90	5
Ryder,	6	9	5	66	5	6	04	3
Ducat,	2	5½	2	13	3	2	27	5
Ten Guilder Piece, 5 do. proportion,	4	8	3	78		4	03	4
MALTA.								
Double Louis,	10	16	8	69	9	9	27	8
Louis,	5	8	4	36	4	4	65	2
Demi Louis,	2	16	2	20	2	2	33	6
MEXICO.								
Doubloons, shares in proportion,	17	9	14	56		15	53	5
MILAN.								
Sequin,	2	53½	2	15	6	2	29	
Doppia or Pistole,	4	1½	3	57	2	3	80	7
Forty Livre Pieces, 1808,	8	8	7	26	1	7	74	9
NAPLES.								
Six Ducat Piece, 1783,	5	16	4	92	5	5	24	9
Two do or sequin, 1762	1	20½	1	51	1	1	59	1
Three do. or Oncetta, 1818,	2	10½	2	34	7	2	49	
NETHERLANDS.								
Gold Lion, or Fourteen Florin Piece,	5	7½	4	73	1	5	04	6
Ten Florin Piece, 1720,	4	7½	3	76	6	4	01	9
PARMA.								
Quadruple Pistole, double in proportion,	18	9	15	59	6	16	62	8
Pistole or Droppia, 1787,	4	14	3	93	5	4	19	4
do. do. 1796,	4	14	3	87	5	4	13	5
Maria Theresa, 1818,	4	2½	3	62	4	3	86	1
PIEDMONT								
Pistole, coined since 1785, half in proportion,	5	20	5	07	5	5	41	1
Sequin, half in proportion,	2	5	2	13	7	2	28	
Carlino, coined since 1785, half in proportion,	29	6	25	63	2	27	34	

NAMES OF COINS.	Weight dw.	gr.	Present standard d.	c.	m.	Stand of July 31, 1834. d.	c.	m.
Piece of 20 Francs, called Marengo,	4	2½	3	34	1	3	56	4
POLAND.								
Ducat,	2	5½	2	13	7	2	27	5
PORTUGAL.								
Dobraon,	34	12	30	66	6	32	70	6
Dobra,	18	6	16	22	2	17	30	1
Johannes,	18		16			17	06	4
Moidore, half in proportion,	6	22	6	14	9	6	55	7
Piece of 16 Testoons, or 1600 Rees,	2	6	1	99	2	2	12	1
Old Crusado of 400 Rees,		15		54	9		58	8
New do. 480 do.		16½		50	8		63	5
Milree, coined in 1755		19½		73	2		78	
PRUSSIA.								
Ducat, 1748	2	5½	2	13	7	2	27	9
do. 1787	2	5½	2	12	5	2	28	7
Frederick, double, 1769	8	14	7	47	5	7	97	5
do. do. 1800	8	14	7	45	4	7	95	1
do. single, 1778	4	7	3	74	9	3	99	7
do. do. 1800	4	7	3	72	5	3	97	5
ROME.								
Sequin, coined since 1760,	2	4½	2	10	9	2	25	1
Scudo of Republic,	17	0½	14	88	8	15	81	1
RUSSIA.								
Ducat, 1796,	2	6	2	15		2	29	7
do. 1763,	2	5½	2	12	5	2	26	7
Gold Ruble, 1756,	1	0½		90	9		96	7
do. 1799,		18½		69	1		73	7
do Polten, 1777,		9		33	1		35	5
Imperial, 1801,	7	17½	7	34	9	7	88	9
Half do. 1801,	3	20½	3	67	3	3	91	8
do. do. 1818,	4	3½	3	68	9	3	93	3
SARDINIA.								
Carlino, half in pro.	10	7½	8	88	1	9	47	2
SAXONY.								
Ducat, 1784,	2	5½	2	12	5	2	26	7
do 1797,	2	5½	2	13	7	2	27	9
Augustus, 1754,	4	6½	3	68	5	3	93	5
do 1784,	4	6½	3	72	5	3	97	4
SICILY.								
Ounce, 1751,	2	20½	2	35	1	2	50	4
Double do. 1758,	5	17	4	72	7	5	01	4
SPAIN.								
Doubloons, 1772, double and single and shares in proportion,	17	8½	15	03		16	02	8
Doubloon,	17	9	14	56		15	53	5
Pistole,	4	8½	3	64		3	88	4
Coronilla, Gold Dollar, or Vintern, 1801,	1	3		92	1		98	3
SWEDEN.								
Ducat,	2	5	2	09	7	2	28	5
SWITZERLAND.								
Pistole of Helvetic Republic, 1800,	4	21½	4	27	9	4	56	
TREVES.								
Ducat,	2	5½	2	2	5	2	26	7
TURKEY.								
Sequin fonducli, of Constantinople, 1773,	2	5½	1	74	9	1	86	8
do 1789,	2	5½	1	73	3	1	84	8
Half Missier, 1818,		18½		49	1		52	1
Sequin Fonducli,	2	5	1	71	7	1	83	
Yeermeeblekblek,	3	1½	2	84		3	02	8
TUSCANY.								
Zechino, or Sequin,	2	5½	2	16	6	2	31	8
Ruspone of the Kingdom of Etruria,	6	17½	6	50	5	6	92	8
VENICE.								
Zecchino, or Sequin, shares in proportion,	2	6	2	16	6	2	31	
WIRTEMBURG.								
Carolin,	6	3½	4	59	4	4	89	8
Ducat,	2	5	2	60	7	2	23	5
ZURICH.								
Ducat, double and half in proportion,	2	5½	2	12	5	2	26	7

An Act supplementary to an act to amend the several acts respecting copyrights.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all deeds or instruments in writing for the transfer or assignment of copyrights, being proved or acknowledged in such manner as deeds for the conveyance of land are required by law to be proved or acknowledged in the same State or district, shall and may be recorded in the office where the original copyright is deposited and recorded; and every such deed or instrument that shall at any time hereafter, be made and executed, and which shall not be proved or acknowledged and recorded as aforesaid, within sixty days after its execution, shall be judged fraudulent and void against any subsequent purchaser or mortgagee for valuable consideration without notice.

Sec. 2. And be it further enacted, That the clerk of the District court shall be entitled to such fees for performing the services herein authorized and required, as he is entitled to for performing like services under existing laws of the United States.

Approved, 30th June, 1834.

LATEST FROM HAVANA AND MEXICO.—Our papers from Havana to the 5th July, contain a proclamation of General Santa Anna, dated Mexico, May 21, deploring the evils that exist throughout the country, and convening the legislature of the general government on the 24th, the day following, that they may adopt what in their wisdom shall seem fit. There is nothing else interesting.

[*From the Army and Navy Chronicle.*]

THE REGIMENT OF DRAGOONS is now completed to its establishment, and all the companies have marched to Fort Gibson, where the head quarters have been established during the winter. This regiment is composed of ten companies, of about seventy men each; each man is armed with a sword, pistol, and carbine. The carbine is of a peculiar description; it is on the principle of Hull's rifles, loads it is on the breech, and the part containing the charge is so constructed as to separate from the barrel by means of a spring. This part may be called the chamber; and is about six inches long; when loaded, it is easily returned to its position, and then, if the percussion cap is put on the touch-hole, the piece is ready for firing; it requires no ramrod, yet it is furnished with one, which answers the purpose of wiper, and, when drawn out, makes a bayonet equal in length to the barrel of the piece, and is a very formidable weapon. The whole piece weighs seven pounds and a half, and carries balls twenty-four to the pound.

The Dragoons are instructed to serve on horse or foot, as occasion may require. About this time, it is expected that they are on the expedition among the tribes of Indians inhabiting the country between the Rocky Mountains and the Mississippi. They are to proceed across the country to the *bogy* of the Red River, thence westwardly towards the Mexican frontier, thence northward as far as it may be prudent to go, allowing time to return before the cold weather sits in. On its return, the regiment will descend by the Missouri on either bank.

Four companies will winter at Fort Leavenworth, viz: Wharton's, Hunter's, Ford's, and Duncan's.

Three companies, Sumner's, Boon's and Browne's, on the right bank of the Mississippi, within the Indian country, near the mouth of the Des Moines.

The other three companies, Trenor's, Bean's and Perkin's at or near Fort Gibson.

The expedition, it is understood, will be accompanied by several gentlemen of science, who go at their own expense. The object of the expedition is to give the wild Indians some idea of our power, and to endeavor, under such an imposing force, to enter into conferences with them, to warn those Indians who have been in the habit of robbing and murdering our people who trade among them, of the dangers to which they will be exposed in case they continue their depredations and massacres.

Several delegations of the newly emigrated Indians, now settled beyond the limits of the States and Territories, to the westward of the Mississippi, as well as of the Osages and other tribes near them, will accompany the expedition, in the hope of making treaties of friendship with the wild tribes, and thus prevent, for the future, the recurrence of those wars which are so common among the Indians.

The expedition, it is hoped, will result in much good; it will afford protection to the civilized Indians, to our frontiers, to our trade with the natives, and cover the Santa Fe caravans trading with Mexico; and, perhaps, enlighten the Indians generally as to the humane policy of the United States towards them, and and also as their their own true interests.

[*From the Albany Evening Journal.*]

DEATH OF CITIZEN GENET.—Edmund C. Genet, Esq. died at his residence in Schodack, Rensselaer County, this afternoon, after an illness of two days. Mr. Genet came to this Country as Minister of the French Republic, soon after the Revolution, and when superceded, took up his permanent residence among us as a private citizen.

[*From the Journal of Commerce.*]

NEW FERRY TO BROOKLYN.—A special Committee of the Board of Assistants to whom this subject was referred, have reported in favor of establishing a new Ferry from Whitehall Slip in New York, to the foot of Atlantic street, Brooklyn, and selling the lease of the same for ten years to the highest bidder at public Auction. The subject is to be made the special order of the day for the next meeting.

Harvard University.—The usual Valedictory Oration and Poem was to be delivered before the graduating class on Tuesday last in the University Chapel, The Oration by J. H. Williams, of Maine, and the Poem by Royall Tyler, of Boston.

NEW-YORK AMERICAN.

JULY 12—19, 1834.

LITERARY NOTICES.

THE LIFE OF ALEXANDER HAMILTON, *by his son*, JOHN C. HAMILTON; vol. 1st; N. York, HALSTED & VOORHIES.—The men of the Revolution were worthy to co-operate in the great cause which their virtues, talents and disinterestedness rendered triumphant; and it is, therefore, always with renewed satisfaction that we receive accurate biographical notices of them. The few years past have contributed largely to our stock of such biographies. Austin's life of *Elbridge Gerry*, Sparks's life of *Gouverneur Morris*, the life of *John Jay* by his son, and that of *Gov. Livingston* of New Jersey, by Theo. Sedgwick, jr., have revealed to grateful posterity—for already we are posterity to the heroic race of the Revolution, of whom so few yet linger on the stage—the many claims of those Fathers of our country to the admiration and gratitude of the millions for whom, and for their descendants, they established Freedom under the shield of written constitutions. To these, comes now to be added the first volume of the life of *Alexander Hamilton*, so long expected, so often undertaken, so difficult to write with impartiality, so full of interest if thus written. When we say, that with the exception to be hereafter noted, we think the volume before us fulfils these conditions, we pronounce upon it the highest eulogy. It must be added, however, that the most difficult part of the biographer's task yet remains to be executed, as the narrative thus far terminates with the retirement of Col. Hamilton from active military service, after the brilliant achievement, in which he bore so conspicuous a part, at Yorktown.

Hamilton was born in the small island of *Nevis*, in the West Indies, and when quite a lad was placed in the counting house of N. Cruger, Esq., a distinguished merchant of *Santa Cruz*. It was while in this situation, and when not thirteen years old, that he wrote the following letter to a school companion. We think it so remarkable for the high aspirations, and well founded reliance in his capacity for greater things, which were realized in after life, as well as for the force of some of its thoughts and expressions, that we are sure our readers will gladly see it:

St. Croix, Nov. 11, 1769.

DEAR EDWARD: This serves to acknowledge the receipt of yours per Captain Lowndes, which was delivered me yesterday. The truth of Capt. Lightbowen and Lowndes' information is now verified by the presence of your father and sister, for whose safe arrival I pray, and that they may convey that satisfaction to your soul, that must naturally flow from the sight of absent friends in health; and shall for news this way, refer you to them.

As to what you say, respecting your soon having the happiness of seeing us all, I wish for an accomplishment of your hopes, provided they are concomitant with your welfare, otherwise not; though doubt whether I shall be present or not; for to confess my weakness, Ned, my ambition is prevalent, so that I contemn the grovelling condition of a clerk, or the like, to which my fortune condemns me, and would willingly risk my life, though not my character, to exalt my station. I am confident, Ned, that my youth excludes me from any hopes of immediate preferment, nor do I desire it; but I mean to prepare the way for futurity. I'm no philosopher, you see, and may be justly said to build castles in the air; my folly makes me ashamed, and beg you'll conceal it; yet, Neddy, we have seen such schemes successful, when the projector is constant. I shall conclude by saying, I wish there was a war. I am, dear Edward, yours, ALEX. HAMILTON.

P. S. I this moment received yours by William Smith, and pleased to see you give such close application to study.

Addressed to "Edward Stevens, in New York."

It should be remembered to the credit of the influence of a commercial education, to expand while it methodizes the mind, that frequently, in after life, Hamilton referred to the time passed by him in the counting house, as most profitably spent. He was after a time removed to New York, for the benefit of better instruction than the West Indies could afford; and after passing some time at a school in Elizabethtown, kept by Mr. Barber,—who afterwards, as Col. Barber, greatly distinguished himself in the revolutionary war—he was placed at King's, now Columbia, College. The diligence with which he improved the opportunities now afforded him of acquiring knowledge was remarkable; and as the questions between the mother country and the colonies now began to assume the most threatening aspect, a mind so energetic and active, and a temper so ardent as Hamilton's, could not refrain from taking part in them; and in July, 1774, on occasion of what was long remembered as the "great meeting in the fields," convened to denounce the Boston port bill, and to recommend the choice of delegates throughout the State to a Continental Congress, he, then only 18 years of age, addressed the meeting in a strain of fervor, eloquence and argument, that called forth the loudest applause. From this time, he became a writer in favor of the rebel cause, and still a collegian, was, as a pamphleteer, frequently the antagonist of the President of the College, Dr. *Cooper*, and others of the clergy of the Established Church, who zealously espoused the cause of the mother country. The extracts given from some of these political writings of Hamilton, evince a degree of reflection, knowledge, and foresight, that, in a youth of his age, are probably not to be paralleled.

We shall be excused, by New Yorkers at least—though they have not yet done justice to the character of one of their noblest fellow citizens, General Schuyler—if we here interrupt the narrative of Hamilton's life, to introduce a rapid but glowing sketch, drawn by the author, of that distinguished individual, at the commencement of the revolution.

Colonel Schuyler, had been a partizan officer in the war of seventeen hundred and fifty-six. By his fertility of resource and unyielding energy, he rendered distinguished services to the British commander, [Lord Howe] who fell, lamented, by his side, and to him the honor of his interment was confided. Descended from one of the early Dutch settlers of this province, the influence and respectability of whose family had been transmitted through successive generations, he exercised an almost unrivalled sway over the minds of the descendants of a people, whose first mention in history, as a distinct political community, is associated with the assertion of their liberties.

Possessed of great wealth, he embarked it in the contest, as a pledge of his patriotism, and, in the course of the revolution, sacrificed as much of fortune and of feeling, as any other individual in America.

Party to the most secret councils of the continent he had staked every thing on the issue of the conflict, and had acquired a weight of influence which led both Virginia and Massachusetts to regard him as the connecting link in the great purposes at which they aimed. "On the shoulders of this great man," said Judge Benson, "the conduct of New-York rested."

His love of fame was less than his love of country; and when the misadventures of some robbed him of the glory to which he was entitled, and while artifice withheld from him an opportunity of vindication, he is not seen indulging in invidious comments on the successes of others, but continuing within the sphere of great influence and resources, to advance the cause of his early preference. Thus, his strength of character sustained him when other men sink, and his adversity gave him more true honor than he could have derived from success.* Sullied by no private vices, and misled by no small passions, his path through life was high, unspotted, equal; and he died with a reputation, which those who knew and followed him, have contended to perpetuate.

When it was decided that the sword was to be the arbiter of the difficulties between the mother country and the colonies, Hamilton, whose predilection was for arms, sought and obtained, though under 20 years of age, the command of the only artillery company raised by the State; and with this company he went through the disastrous campaign of 1776, from the battle on Long Island to the final establishment of the troops under General Washington, in winter quarters, at Morristown. In the ensuing March he accepted, though with great violence to his military ambition, which panted for opportunities of distinction from an active command in the field, the station of aid-de-camp to General Washington, and so continued until February, 1781; when, from some trifling misunderstanding between them, Hamilton instantly relinquished his station, and would listen to no proposition to return, though no abatement occurred in the mutual esteem and friendship of the parties. While in the family of the Commander in-Chief, he appears to have enjoyed his highest confidence, which was never more signally manifested, nor justified, than by the mission, and the manner in which it was executed, of young Hamilton to Gates. After the surrender of Burgoyne, Washington required, from the northern army, a detachment of all the disposable force, in order that he might, while the water defences of the Delaware were yet complete and in his possession, reduce Howe, then in Philadelphia with his army, and cut him off from all communication with the fleet, in the same way that Burgoyne was reduced. *Gates*, puffed up with the victory at Saratoga, prepared to his hand by Schuyler—who was superseded at the moment when he was about to reap the benefit of all his toils, skill and sacrifices—lent a reluctant ear to the demands of Washington; and the address, decision and judgment with which the young aid-de-camp managed and controlled the weak but victorious, and then popular General, are well set forth in the Sixth Chapter of the volume, as, in the subsequent chapter, are the intrigues in Congress and the army, to supersede Washington, and place first Lee, then Gates, and even Conway, in the chief command.

We said at the outset of these remarks, that with a single exception, we thought the biographer had manifested impartiality. That exception consists in the claim for Hamilton, of having written, in the name of Washington, almost every important paper transmitted during his connection with the General as aid-de-camp. It may be that this is so, but the evidence of it is not given to the public. Sometimes, indeed, it is said that the original drafts, in the hand writing of Hamilton, remain; but more frequently it is simply stated, that he addressed in the name of Washington such a letter, or such a remonstrance, or such an order: at other times, when this is not directly asserted, it is left open to implication, as, for instance, after publishing the correspondence between Washington and Gates, respecting Conway's secret denunciations, entertained and encouraged by Gates, of Washington's abilities as a soldier, it is said at page 143, "This correspondence, *written on the part of Washington* with a master's hand," &c. The expression we have italicised would seem to imply that Washington was not the writer; while, from the manner in which Colonel Hamilton's name had been mixed up in the controversy, the credit of the "master's hand" could not with propriety be directly claimed for him.

It is by no means intended to maintain that Hamilton was not very frequently the writer of General Washington's despatches and addresses; but the homogeneousness of all these productions, both while Hamilton was a member of his family and afterwards, proves, that one mind stamped the character upon all, and that, in fact, though others might arrange and record the ideas and arguments to be used on any given occasion, Washington himself furnished the substance of those ideas and arguments.

Upon the whole, we have laid down this volume

* "I hope," said Mr. Jay, "you will seriously determine to serve your country, at least in a legislative capacity. Class yourself with those great men of antiquity, who, unmoved by the ingratitude of their country, omitted no opportunities of promoting the public weal."—12th February, 1778.

with impressions raised—high as they were before—of the great and varied abilities of Gen. Hamilton, and with much new information and proportionate admiration, of the chivalrous and daring military spirit which he evinced during the war, and which he earnestly sought every opportunity of indulging at any personal hazard; as, for instance, at the battle of Monmouth Court House, where victory was so treacherously thrown away by Lee. The letters and financial plans, submitted at first anonymously, and afterwards directly, by Hamilton to Robert Morris, are among the most remarkable papers ever published, as showing the deep reflection, and sound views—sound much beyond the period in which they were formed—which, amid the din of arms and the incessant duties of his military station, he had been enabled to mature, on subjects so foreign to his then pursuits, and always so liable to error.

It would seem needless to add, that we shall look with impatient interest for the continuation of this biography.

Chemistry, Meteorology, and the Functions of Digestion, considered with reference to Natural Theology: by Wm. Prout, M. D., F. R. S. 1 vol. *Philadelphia: Carey, Lea & Blanchard.*—There is no one of the four Bridgewater treatises which have preceded this one, that more clearly proves than it, the error of having arbitrarily divided the topics connected with the object specified in the will of the noble and revered clergyman. The matters of chemistry, meteorology, and the functions of digestion, would not, and do not, occupy more than half the volume, which, in order that it might, we suppose, emulate its predecessors in bulk, had to be spun out by arguments—good enough in themselves, though not expressed with any remarkable precision or elegance—drawn from branches of the subject committed to other hands. There is, undoubtedly, in this volume, much of useful information, and many just views of the power and goodness of God as manifested in the Creation; but as a whole, it does not strike us at all as a superior performance.

We make an extract—not so much in reference to the main design of the work, as to lay before our readers a curious fact connected with the appearance in London of the Epidemic Cholera:

The matters occasionally diffused through the atmosphere, which appear to be *in a state of solution*, are not often perceptible by our senses, unless in some cases, perhaps, by the sense of smell.

As an instance of the presence of such bodies in the atmosphere we may mention a very remarkable observation which occurred to the writer of this treatise during the late prevalence of epidemic cholera. He had for some years been occupied in investigations regarding the atmosphere; and for more than six weeks previously to the appearance of cholera in London, had almost every day been engaged in endeavoring to determine, with the utmost possible accuracy, the weight of a given quantity of air, under precisely the same circumstances of temperature and of pressure. On a particular day, the 9th of February, 1832, the weight of the air suddenly appeared to rise above the usual standard. As the rise was at the time supposed to be the result of some accidental error, or of some derangement in the apparatus employed; in order to discover its cause, the succeeding observations were made with the most rigid scrutiny. But no error or derangement whatever could be detected On the days immediately following, the weight of the air still continued above the standard; though not quite so high as on the 9th of February, when the change was first noticed. The air retained its augmented weight during the whole time these experiments were carried on, namely, about six weeks longer. The increase of the weight of the air observed in these experiments was small; but still decided, and real. The method of conducting the experiments was such as not to allow of an error, at least to an amount so great as the additional weight, without the cause of that error having become apparent. There seems, therefore, to be only one mode of rationally explaining this increased weight of the air at London in February, 1832; which is, by admitting the diffusion of some gaseous body through the air of this city, considerably heavier than the air it displaced. About the 9th of February the wind in London, which had previously been west, veered round to the east, and remained pretty steadily in that quarter till the end of the month. Now, precisely on the change of the wind the first cases of epidemic cholera were reported in London; and from that time the disease continued to spread. That the epidemic cholera was the effect of the peculiar condition of the atmosphere, is more perhaps than can be safely maintained; but reasons, which have been advanced elsewhere, lead the writer of this treatise to believe that the virulent disease, termed cholera, was owing to the same matter that produced the additional weight of the air. The statement of these reasons here would be quite out of place: it is enough to say, that they are principally founded on remarkable changes in certain secretions of the human body, which, during the prevalence of the epidemic were observed to be almost universal; and that analogous changes have been observed in the same secretions of those, who have been much exposed to what has been termed *Malaria*. The foreign body, therefore, that was diffused through the atmosphere of London, in February, 1832, was probably a variety of malaria.

Boys' and Girls' Library of Useful and Interesting Knowledge, Vol. XX.—N. Y., *Harper and Brothers.*—In this admirable little book, Uncle Philip re-appears, and abandoning, for the present, subjects of Natural History, undertakes to explain to children the truth of the Christian Religion. We have carefully read these "Evidences of Christianity," designed for the comprehension and instruction of childhood; and while we say that no child, of ordinary faculties, can fail to perceive and feel the force and drift of the arguments used, we are quite sure many grown persons, many parents, will, in this volume, find knowledge and conviction where, before, they have rather taken upon trust, than sought to be personally informed and satisfied. The mode of proof adopted in these pages is analogous, in some degree, to that so beautifully and logically exemplified in the *Horæ Paulinæ* of Paley—that is to say, to prove, first, by testimony, extrinsic of the New Testament, the existence of such writings at the time they purport to have been written, and their identity with those we now have; and then, by the simple and inartificial statements of the writings themselves, and the want of caution, or the presumption of fraud, with which details immaterial to the main narrative are constantly given, but which, if false, would furnish so many sure and more ready means of detection—to infer the truth of these writings. In this and other mode, having established—*by testimony stronger and more connected*, than that upon which we believe, without hesitation, any leading fact in profane history—the authenticity of the Scriptures, they themselves then become, by the doctrines they inculcate, and the miracles performed to shew that those doctrines were of God, additional evidence. This is a very imperfect sketch of the design of this most valuable little treatise; but it may, we hope, serve the purpose of awakening to it the attention of many parents, and, we hope, of Sunday School Teachers, for whose use it is so admirably adapted.

The Life of the Rev. Rowland Hill, by the Rev. Edwin Sydney. 1 vol. New York: *D. Appleton & Co.*—The career of the Rev. Rowland Hill—prolonged to nearly 90 years, and active almost to the last—is certainly a very remarkable one.—Sprung from a distinguished family, educated for the ministry of the Established Church, and early and deeply impressed with a vital sense of religion, he was as it were driven into *methodism* by a strict adherence on the part of the Church to forms, which, in his judgment, restrained the usefulness and efficiency of a preacher. His biographer, a minister of the Church of England, has given an impartial and interesting view of the labors, talents, and earnest sincerity of this eminent man, which will, we do not doubt, be eminently acceptable to those of his own sect, and is not without attraction for all others.—Among other motives which in this country may give currency to this biography, it may be mentioned that he was a staunch opposer of the measures which brought on the war of the American revolution, and frequently from his pulpit, in 1776, denounced this war. This gave something of a political character to his bitter dispute with *John Wesley*, who espoused the cause of the mother country, and proclaimed Hill's language concerning the revolted colonies as "disloyal." We extract from this volume the following letter, both as indicative of that vein of humor which characterized the writer, and sometimes led him indeed in the pulpit to introduce language and imagery little suited to the solemnity of the place, but chiefly as inculcating an admirable lesson to public speakers, in meetings whether religious, charitable or political, to avoid that greatest of all bores "circumlocutiousness." The letter was in reply to an invitation to preside at a meeting of the *Tract Society*.

Wotton, Sept. 20, 1826.

My Dear Friend:—An old man, in the 83d year of his age, ought to be a little provident of his remaining strength. You will say, no bodily strength can be needed, to sit quietly in a chair at a public meeting. True, but no small degree of mental patience is needed, while the poor chairman must sit it out for three hours at the least, to hear many a tiresome long speech (if they are not all of the same sort) without any remedy or redress, upon the high *fidgets*, above half the time gaping and watching the clock. In most of these public meetings I have been tired down before they have been half over, and have been obliged to sheer off with the remains of patience, and leave the finishing to others, while nothing but a short speech might have been expected from me.

In the way in which too many of these sort of meetings are now conducted, I have many fears, that many a good cause is injured by the means adopted for their support. Though some may be gratified by what may be said to the point, yet O the dullness, the *circumlocutiousness*, the conceit, the tautology, &c. &c. of others. In short, few know how to be pithy, short, and sweet. And as I find it very difficult to be pithy and sweet, my refuge at all times is to be short. Pity, therefore, a poor old man, and let him not be sentenced to suffer such a sort of pillory punishment, and try if you cannot persuade some other good tempered sinner to suffer in his stead.—

Yours very sincerely and affectionately,

Rowland Hill.

Mr. Jones, Religious Tract Society,
Paternoster Row, London.

Works of Mrs. Sherwood; vol. II, uniform edition; New York, *Harper & Brothers.*—We have heretofore expressed satisfaction with this undertaking of the Harpers; for although we think Mrs. Sherwood sometimes too *exacting* in her requisitions, and narrow in her views of duty, the general scope and design of her writings are so praiseworthy, and they are carried out with so much talent, as to render them highly attractive. The present volume contains *The Fairchild Family*, *The Orphans of Normandy*, and *The Latter Days*.

The Nun, by Mrs. Sherwood. *Princeton, M. Baker.*—This is a new publication of Mrs. Sherwood, aimed, as may be inferred by the title, at the Catholic religion. It purports to be the story of a novice, who, having taken the white veil, is released by one of the popular tumults arising from the French revolution, before the final dedication of herself by the ceremony of taking the black veil, but not before she had become acquainted with some of the intolerance, bigotry and cruelty, by which the inmates of the convent were subdued. It is certainly a tale of interest; but how far it shadows forth the truth of a convent life, we have no means to judge,—and sooth to say, we so much dislike polemics in every shape, that we care not to inquire.

Guy Rivers, a Tale of Georgia—by the author of Martin Faber—2 vols., Harpers.—There has been no American novel since the days when the appearance of Mr. Cooper's Spy created such a sensation in our reading public, that has excited half the interest that will attend the circulation of Guy Rivers,

which we do not hesitate to say will at once establish its author's reputation as one of the first novel writers of the day. Its defects may, indeed, be easily set forth, but they are not such as seriously affect the character of the work, and arise only from a want of judgment, betrayed in but a few instances.

The story of Guy Rivers is one of frontier life; the scene being laid upon that debateable ground which existed for so many years on the confines of Georgia and the Cherokee country. The characters are chiefly drawn from that celebrated association of ruffians known as "The Poney Club"—a very cleverly written account of which was communicated in our columns last winter, by a young officer of the army, who had been stationed in the neighborhood of their operating ground. There are also several boldly drawn backwoodsmen, who do not deserve to be classed with this amiable fraternity; and in immediate contrast with the rough nature of both these, in some points, assimilating parties, we have several high-bred Carolinians, and a group of female characters so admirably drawn, that either of them would supply Mr. Cooper with capital enough, in the way of womanly traits, to redeem half his heroines. In this general enumeration of the dramatis personæ, we have particularly avoided giving any insight into their characters individually, though there are several of them which would bear a very minute dissection. If there be one defect in their drawing, it is in giving too much of a metaphysical turn to all the important ones; a coloring unnatural itself, when thus broadly laid on, and impairing the effect produced by the prominent personage, in assimilating others to himself in a striking characteristic. Indeed, we are inclined to think that the author has injured his work, by keeping the excellent moral which he had proposed to himself, too much in the foreground by these lengthened discussions, which certainly at times sound oddly in the mouths of the wild characters so well delineated in other passages, and in no slight degree destroy the keeping of the animated scenes into which they are not always skilfully introduced. They give an insight into the mind of the author, rather than into the soul of his characters, and while adding to our respect for his resources, diminish our admiration of his judgement and his skill. But these blemishes, where they do exist, are attributable only to want of tact, and never to want of Power, for our author, though sometimes tedious, is never dull. His tediousness does not arise from insipidity in himself, but from the eagerness of the reader to break through every thing that any way retards the thread of his thrilling story. If we had any other of these frivolous objections to make against the details of a production so richly entitled to praise as a whole, it would be by hinting at a degree of bad taste manifested in dwelling so much upon certain qualities of every gentleman which our author, by the way he speaks of them, seems to think peculiar to the Southron, and characteristic of the Carolinian above all others. "The chivalry of the South," is a cry so dinged into one from his earliest years, by all who draw breath below Mason & Dixon's line, that one really becomes sick of it, and whatever may be our predilection for those traits of Southron character which, among school boys, in colleges, at watering places, or at home, do decidedly make it personally the most popular in the Union, we cannot, in spite of a thousand agreeable associations with it under all these circumstances, but feel a sort of disgust at this wholesale appropriation of praise under all circumstances and in all places. At political meetings of mixed people at home it might indeed be expected; but we have it every where—on the floor of Congress—in general society—in grave public documents—and, as in the present instance, in light and elegant literature.

A man with the philosophical turn of mind possessed by our author, must know that variety of character is seldom found upon the surface in the more elevated regions of society—that a gentleman is a gentleman, all the world over—and that certain requisites which go to make up his character, can be no where dispensed with; above all, he knows that good breeding and exclusiveism are incompatible with each other; for the implied benevolence which is the soul of good-manners, embraces every one within the sphere of its influence. The term *aristocratic*, which he uses so frequently in speaking of deportment, we object to decidedly, if meant to imply more than the mere physical appearance—the *blooded* look of an individual. *Republicanism* is the very essence of finished manners; and we could quote no less authority than Chesterfield to bear us out in the assertion. For by Republicanism we mean that general consideration that should be extended to the self-love of every one, that embrasive politeness and kindness of demeanor that comprehends the humblest within its winning circle—that is practised toward all from an inward feeling of refined humanity, and not awarded in certain measures to each as they may establish their proportionate claim to consideration. To such a tone of breeding, elevated without hauteur, and refined without being exclusive, we should never, as the word is generally received, apply the term aristocratic. Such a tone of breeding constitutes even more than his eloquence and his wit, the magic of manner that witches every one who has ever exchanged five words with Henry Clay. The Kentuckians, indeed generally, and the western Virginians, have more of it, especially in the half educated classes, than we ever witness here; and, if manners are to be the criterion of sectional superiority, it is among the mass of the people, and not the highly educated few, that we should look.—But to break short this travelling digression, we must not, after thus adding one more to the trivial faults discoverable in Guy Rivers, take leave of our author, without giving him heartfelt thanks for the entertainment we have received from his masterly production. We took occasion in our notice of Martin Faber, to pay a slight tribute to his literary powers, and express the wish that they would soon be exercised upon a work better conceived in itself, and that would afford broader scope for his talents. That wish has been amply gratified in the production before us, which, apart from the higher intellectual power manifested in it, would be sufficient only as a vivid picture of manners, to establish a most enviable reputation for its author.

After marking a number of fine passages and striking scenes for quotation, our limits allow us only room for the following: †

The Assassination.—They reached the point proposed in due season; their victim had not yet made his appearance, and they had sufficient time for all their arrangements. The place was one well calculated for the successful accomplishment of a deed of darkness. The road at the foot of the hill narrowed into a path scarcely wide enough for the passage of a single horseman. The shrubbery and copse on either side overhung it; and in many places were so thickly interwoven, that when, as at intervals of the night, the moon shone out among the thick and broken clouds, which hung upon and mostly obscured her course, her scattered rays scarcely penetrated the dense enclosure. At length the horsemen approached and in silence. Descending the hill, his motion was slow and tedious—he entered the fatal avenue, and, when in the midst of it, Rivers started from the side of his comrade, and advancing under the shelter of a tree, awaited his progress. He came—no word was spoken—a single stroke was given, and the horseman, throwing up his hands, grasped the limb which projected over, while his horse passed from under him. He held on for a moment to the branch, while a groan of deepest agony, mental as well as physical, broke from his lips, when he fell supine to the ground. At that moment, the moon shone forth unimpeded and unobscured by a single cloud. The person of the wounded man was fully apparent to the sight. He struggled, but spoke not; and the hand of Rivers was again uplifted, when Munro rushed forward.

"Stay—away, Guy—we are mistaken—this is not our man."

The victim heard the words, and, with something like an effort at a laugh, though seemingly in great pain, exclaimed—

"Ah, Munro, is that you?—I am so glad;—but I'm afraid you come too late. This is a sad jest!"

It was Forrester who spoke, and Munro would have saved him; but Rivers, who had done himself no injustice in the narrative which we have already heard, rejected the more merciful suggestion. The wounded man saw his action and heard the controversy, and the few words he was enabled to utter were those of prayer and entreaty.

"Save, me Wat—he will strike again—I have done you no harm—I will do you none—and—would live, Wat—would live—happy—Kate."

He threw his hands with fearful energy as he beheld his murderer—from whom Munro had wrested the weapon originally used—aiming a second blow with the small hatchet which he always wore. The interposition of Munro was without avail; the sharp steel drove through, separating the extended fingers of the fallen man as he threw them up, and crushing and crunching deeply into the scull. The unhappy woodman sank back, without groan or further word, even as an ox beneath the stunning stroke of the butcher.

OUTRE-MER, OR A PILGRIMAGE BEYOND THE SEA; No. 2. Boston: Hilliard Gray & Co.—The classic pen of Professor Longfellow is not less apparent in this continuation of his light and sketchy, but highly polished work, than in the number we had occasion to notice about a year since. The work, as our readers are probably aware, consists of papers chiefly descriptive and humorous, somewhat upon the plan of "The Sketch Book," enriched occasionally by an article like that from which we shall here make some extracts, which indicate a great familiarity on the part of the author with sources of literature but seldom drawn from, and exhibiting a remarkable facility and grace in re-setting their almost forgotten gems, in a dress that brings their buried beauty before us in all the charm of original freshness and brilliancy.

The ingenious writings of Sismondi have made us so familiar with the origin and genius of the Troubadours, that it is unnecessary to copy here the various information embodied in the first part of the article entitled "The Trouveres," though we might, without impertinence, refer many to it for information which would be entirely novel to them. But the happiness with which Mr. Longfellow has succeeded in transfusing the light and sparkling grace, the freedom, and touching simplicity of his originals, into the following rambling translations, will bear us out in choosing this long but attractive quotation as a favorable specimen of the attractions of *Outre-Mer*. †

The favorite theme of the ancient lyric poets of the North of France is the wayward passion of love. They all delight to sing *les douces dolors et li mal plaisant de fine amor*. With such feelings the beauties of the opening Spring are naturally associated. Almost every love ditty of the old poets commences with some such exordium as this: "When the snows of winter have passed away, when the soft and gentle spring returns, and the flower and leaf shoot in the groves, and the little birds warble to their mates in their own sweet language,—then will I sing my lady-love!"

Another favorite introduction to these little rhapsodies of romantic passion, is the approach of morning and its sweet-voiced herald, the lark. The minstrel's song to his lady-love frequently commences with an allusion to the hour,

> 'When the rose bud opes its e'n,
> And the blue bells droop and die,
> And upon the leaves so green
> Sparkling d-w-drops lie'

The following is at once the simplest and prettiest piece of this kind which I have met with among the early lyric poets of the North of France. It is taken from an anonymous poem entitled, "The Paradise of Love." A lover having passed the "live-long night in tears, as he was wont," goes forth to

beguile his sorrows with the fragrance and beauty of morning. The carol of the vaulting sky-lark salutes his ear, and to this merry musician he makes his complaint:

Hé! alouette,
Jolliete!
Petit t'est de mes maus.

Hark! hark!
Pretty lark!
Little heedest thou my pain!
But if to these longing arms
Pitying Love would yield the charms
Of the fair
With smiling air,
Blithe would beat my heart again.

Hark! hark!
Pretty lark!
Little heedest thou my pain!
Love may force me still to bear
While he lists consuming care,
But in anguish
Though I languish,
Faithful shall my heart remain.

Hark! hark!
Pretty lark!
Little heedest thou my pain!
Then cease, Love, to torment me so:—
But rather than all thoughts forego
Of the fair
With flaxen hair,
Give me back her frowns again.

Hark! hark!
Pretty lark!
Little heedest thou my pain!—

Beside the "woful ballad made to his mistress' eyebrow," the early lyric poet frequently indulged in more calmly analyzing the philosophy of love, or in questioning the object and destination of a sigh. Occasionally these quaint conceits are prettily expressed, and the little song flutters through the page like a butterfly. The following is an example:

Et ou vas tu, petit soupir,
Que j'ai ouï si doulcement?
And whither goest thou gentle sigh,
Breathed so softly in my ear?
Say; dost thou bear his fate here
To Love's poor martyr doomed to die?
Come; tell me quickly,—do not lie,
What secret message bringest thou here?—
And whither goest thou, gentle sigh,
Breathed so softly in my ear?—
May heaven conduct thee to my will,
And safely speed thee on thy way;
This only I would humbly pray—
Pierce deep—but, oh; forbear to kill.
And whither goest thou, gentle sigh,
Breathed so softly in my ear?

The ancient lyric poets of France are generally spoken of as a class, and their beauties and defects referred to them collectively and not individually.—In truth there are few characteristic marks by which any individual author can be singled out and ranked above the rest. The lyric poets of the thirteenth and fourteenth centuries stand upon nearly the same level. But in the fifteenth century there were two, who surpassed all their contemporaries in the beauty and delicy of their sentiments; and in the sweetness of their diction, and the structure of their verse, stand far in advance of the age in which they lived. These are Charles d'Orléans and Clotilde de Surville.

Charles, Duke of Orleans, the father of Louis the Twelfth, and uncle of Francis the First, was born in 1391. In the general tenor of his life, the peculiar character of his mind, and his talent for poetry, there is a striking resemblance between this noble poet and James the First of Scotland, his contemporary. Both were remarkable for learning and refinement;—both passed a great portion of their lives in sorrow and imprisonment; and both cheered the solitude of their prison walls with the charms of poetry. Charles d'Orléans was taken prisoner at the battle of Agincourt in 1415, and carried into England, where he remained twenty-five years in captivity. It was there, that he composed the greater part of his poetry. In 1440 he returned to France, where he died in 1467.

The poems of this writer exhibit a singular delicacy of thought and sweetness of expression. The following little *Renouveaux*, or songs on the return of Spring, are full of delicacy and beauty.

Le temes a laissé son monteau
De vent, de froidure et de playe.
Now time throws off his cloak again
Of crumb'd frost, and wind and rain,
And clothes him in embroidery
And glittering sun and clear blue sky.
With beast and bird the forest rings,
Each in his jargon cries or sings:
And Time throws off his cloak again
Of crumb'd frost, and wind and rain.

River, and fount, and tinkling brook
Wear in their dainty livery
Drops of silver jewelry;
In new made suit they merry look:
And Time throws off his cloak again
Of crumb'd frost, and wind and rain.

The second upon the same subject presents a still more agreeable picture of the departure of Winter and the sweet return of Spring.

Bien monstrez, printemps gracieux,
De quel mestier savez servir.

Gentle Spring, in sunshine clad,
Well dost thou thy power display!
For Winter maketh the light heart sad,
And thou,—thou makest the sad heart gay.
He sees thee—and calls to his gloomy train,
The sleet, and the snow, and the wind, and the rain,
And they shrink away—and they flee in fear,
When thy merry step draws near.

Winter giveth the fields and the trees so old,
Their beards of icicles and snow;—
And the rains it raineth so fast and cold,
We must cover over the embers low;
And snugly housed from the wind and weather,
Mope like birds that are changing feather.
But the storm retires, and the sky grows clear,
When thy merry step draws near.

Winter maketh the sun in a gloomy sky,
Wrap him round in a mantle of cloud;
But, Heaven be praised, thy step is nigh;
Thou tearest away the mournful shroud,
And the earth looks bright—and Winter surly
Who has toiled for naught both late and early,
Is banished by the new-born year,
When thy merry step draws near.

The only person of that age who can dispute the laurel with Charles d'Orléans is Clotilde de Surville. This sweet poetess was born in the Bas-Vivarais in the year 1405. Her style is singularly elegant and correct, and the reader who will take the trouble to decipher her rude provincial orthography, will find her writings full of quiet beauty. The following sweet lines, which breathe the very soul of maternal tenderness, are part of a little poem to her first born.

O cher enfantelet, vrey pourtraict de pere!
Dors sur le seyn que ta bouche a pressé.
Sweet babe! true portrait of thy father's face,
Sleep on the bosom that thy lips have prest!
Sleep, little one; and closely, gently place
Thy drowsy eyelid on thy mother's breast.

Upon that tender eye, my little friend,
Soft sleep shall come, that cometh not to me!
I watch to see thee, nourish thee defend—
'Tis sweet to watch for thee—alone for thee

His arms fall down; sleep sits upon his brow;
His eye is closed; he sleeps—how still and calm!
Wore not his cheek the apple's ruddy glow,
Would you not say he slept on death's cold arm?

Awake my boy!—I tremble with affright!
Awake, and chase this fatal thought—unclose
Thine eye but for one moment on the light!
Even at the price of thine give me repose!

Sweet error!—he but slept—I breathe again—
Come gentle dreams, the hour of sleep beguile!
Oh! when shall he for whom I sigh in vain,
Beside me watch to see thy waking smile?

Don Carlos, translated from the German of Schiller, by the author of "a volume from the life of Herbert Barclay"—Baltimore.

[Missing this volume from our table for a day or two, we find it returned to its place this morning, with a slip of paper folded in it, containing the following memorandum, which being in the hand writing of a friend, in whose literary judgment we place much confidence, may happily be substituted here for any comments of our own.]

Translating like dancing, is a good exercise, but a very bad profession: it may serve to try or exhibit or improve our strength, but though it is a good thing to do, it is generally of no value when it is done. The charm of every work of genius is so much in its exterior dress of words, that in throwing that completely aside and clothing it with another, much grace is necessarily destroyed and much disguised, while the translator, by the conscience and the usages of his office, is forbidden himself to supply any, were he ever so capable. The proportions, however, of form and substance are various in different works, and Schiller's Don Carlos is one which possesses a great deal of intrinsic substantial interest, which it must preserve, in any tolerable translation, and which in fact it does preserve, in a pretty high degree, in the one before us. The author, however, has gone out of his way to seek difficulties not at all inherent in his task; he undertakes in many cases, to render line by line and word by word in the exact order and measure of the original; and to this punctilious ambition, he often sacrifices his own powers of versification, and the spirit and idiomatic ease of the English language. We find German inversions which in English are distortions—words cut in halves and their vowels taken out, as pos'ble, hor'ble, ovtrav'gant, and others on hard duty with constrained meanings; and these blemishes, though an argument may be imagined in defence of them, do yet annoy the reader and injure the teacher, in which he judges of the work. Setting these aside, however, this is the performance of a man of decided talent, whose mind is full of admiration for the power and genius of his author, and of a kind zeal for diffusing the pleasure he has derived from them.

FOREIGN INTELLIGENCE.

By the *Francis Depau*, from Havre, we have files from Paris to the 7th ult., which, with the accounts by the *Philadelphia* yesterday, of which we published the substance last evening, are chiefly interesting, as they confirm the accounts *via* Havana, of the surrender of the two Pretenders—*Carlos* and *Miguel*,—and thus afford the prospect that peace and perhaps relatively free governments may be established in Spain and Portugal;—countries so favored by nature, so cursed by man. We extract some details as to the occurrences which led to this surrender. The Spanish General, *Rodil*, seem to have been a special object of terror to *Don Carlos*. It was not ascertained what course he meant to take. Don Miguel had embarked on board the British line-of-battle-ship Donegal.

We do not find the particulars of the reorganization of Lord Grey's Ministry, but the address to him of certain members of the House of Commons, the reply to which will be found among our extracts, and the decisive vote on Mr. Ward's motion, proves, that it meets the ppprobation of the Commons.

England.

[*From the Morning Chronicle.*]

The critical question of the State appropriation of the surplus revenues of the Irish Church, and the imminent situation of the new Cabinet, were temporarily determined last night. A majority of *three hundred and ninety-six* Members of the House of Commons, to a minority of *one hundred and twenty*, supported the amendment of the "previous question," in opposition to the motion of Mr. Ward. The plain truth on such occasions is the only becoming commentary. The division, in fact, was a vote to uphold the Ministry—to avert the political evil of a dissolution of Parliament—to prevent the possibility of a Tory Government—and to postpone a legislative determination of the critical question of appropriation. The events of the preceding week were the causes of the singular and important result of last night's debate. The split in the Cabinet had deprived Lord Grey of the Ministerial services of four Members of his Government, and placed the Premier between two widened extremes. In the recomposition of his administration, he elected to maintain a *Juste-Milieu* position among the hostile parties of the State; and, with the exception of Mr. Elice, his selection of successors to the ex-Ministers was palpably that of men of "moderate" opinions. In common with the great body of reformers throughout the country—judging by the Provincial Press and innumerable private communications—we deeply lamented that Lord Grey did not form a popular and decidedly comprehensive Government. It must, however, be conceded, that the appointments of Lord Grey during the last few days have not been inconsistent with his own personal views. He had contented himself with simply forming a mild Whig Administration. But it must be admitted that Mr. Spring Rice and Lord Auckland are excellent men of business, and that all the nominations to office in the last few days have been made from the ranks of his immediate political friends.

The nature of the Court, the unnured character of the House of Commons, and the conflicting state of parties, added to the danger arrising from the secession of Mr. Stanley and Sir James Graham, all contributed to influence Lord Grey. A large body of the House of Commons also presented an Address to his Lordship—we will not stay to inquire into its partisan origin or influence—expressive of their confidence. We well know that the motives, which at a critical conjuncture, determine members to follow in the train of each other in acceding to and signing such an agreement as the document, the contents of which we published on Saturday, must not be too curiously scanned. The general intention of the memorialists was to support liberal principles, and to "back up" Lord Grey in this emergency. Allusion has been made to his Lordship's reply, and the *Standard* and the *Morning Post* have given false representations of its contents. As the document is public, the subject of comment, as it is misstated in the Troy journals and generally circulated in political circles, we give it *verbatim*, to avoid misconstruction:—

"Dear Lord Ebrington—I received yesterday evening your very kind note accompanying the letter, which had been written under the impression

that I had determined to retire from the situation which I now hold.

"Whether I regard the expressions contained in the letter itself, or the number and respectability of the signatures, I cannot help feeling this to be one of the most gratifying testimonials of confidence and good opinion ever received by any public man.

"It imposes on me the duty of making every personal sacrifice that can be required of me, and which can be useful for the support of the principles on which the present Administration was formed. But I will not conceal from you, that declining strength makes it extremely doubtful whether I shall be found equal to the task which is thus imposed me.

"If my endeavors to supply the places of those of whose services the country has been so unfortunately deprived prove successful, it is only by the support of honorable and independent men, in conducting the Government on safe and moderate principles, that I can hope to get through the difficulties which are before me.

"Founded on the principles of Reform, the present Administration must necessarily look to the correction of all proved abuses. But in pursuing a course of salutary improvement, I feel it indispensable that we shall be allowed to proceed with deliberation and caution; and above all, that we should not be urged by a constant and active pressure from without, to the adoption of any measures, the necessity of which has not been fully proved, and which are not strictly regulated by a careful attention to the settled institutions of the country, both in Church and State.

"On no other principle can this or any other Administration be conducted with advantage or safety. I am, &c. "GREY."

"May 31, 1834.

IRELAND.

Death of Dr. Doyle.—This eminent individual, after a long and painful illness, died on Friday at Carlow. He had been formerly in the University of Coimbra, in Portugal, from whence he was transferred to the Professorship of Theology in the College of Carlow, and, in the year 1819, was appointed Bishop of the Catholic diocese of Kildare and Leighlin, being then the youngest man who had ever obtained a simi ar rank in the Irish Catholic Church.—At that period religious controversy was raging in Ireland, and Dr. D. came to the assistance of his co-religionists with a zeal and devotion which nothing could tire. For some years he signed the letters J. K. L. to his productions. He was a strong advocate for the introduction of a well regulated system of poor laws into Ireland, and succeeded in bringing over Mr. O'Connell to his opinions; but that gentleman having subsequently *changed his mind* on that subject, Dr. Doyle addressed a most severe and sarcastic letter to him, pointing out his inconsistences, and asserting, that a man capable of so constantly changing his opinions ought not to possess the confidence of his countrymen. It was in answer to this letter that Mr. O'Connell denounced consistency as a 'rascally doctrine.' He was the first to promulgate the Hohenlohe miracles in Ireland, in the existence of which he appears to have placed implicit belief.

PORTUGAL.

[*From the London Morning Herald.*]

FALMOUTH, JUNE 1, 11 P. M.—The City of Edinburg steamer, Sharpe, has just arrived here from Lisbon, whence she sailed on Wednesday last. The news is important, which you will see by the accompanying, handed me by Col. Sharpe:

LISBON, MAY 26.—The war is now definitively at an end. Don Miguel having surrendered and embarking at the port of Sines, or some other in Algarves, on board a British ship of war, as you will perceive from the enclosed supplement to this day's Chronica, which his Majesty the Emperor himself condescended to hand me an hour ago, at the palace of Necessidades, where I went to congratulate him on the happy termination of his glorious labors, when, from among the crowd of courtiers, he was pleased to single me out as a witness of the commencement and progress of his exertions during the siege of Oporto, when the aspect of affairs was anything but encouraging. Don Pedro, I must say, bears his good fortune with the greatest moderation, and rejoices at the further effusion of blood being spared, and still more so at the safety of his brother, who, had he fallen into the hands of the Duke of Terceira's army instead of Saldanha's, it is apprehended, would have fallen a victim to the fury of the soldiers. Salutes from the batteries and all the ships of war in the river, have been firing all this morning. The despatch of Marshal Saldanha, dated yesterday, from Evora, was ought this morning by his aid-de-camp, Col. Zimires. It is asserted that Don Miguel ordered an attack, but that his soldiers, refusing to obey, secured him, when he made a virtue of necessity, and surrendered.

The city of Edinburgh steamer taking the despatch to England is now preparing to go out, and fearing to miss the opportunity, I conclude.

Don Carlos is said to be in the same boat with Miguel. The Donegal, 74, is to carry them to England.

"To Don Alvaro da Costo, of Her Most Faithful Majesty's Council, Governor and Captain General of the Island of Madeira and Porto Santa, We, the Duke of Braganza, Regent in the name of the Queen, greet you.

"The legitimate authority of my august daughter, Donna Maria Segunda, being happily restored by the efforts of her gallant army, as well as by the spontaneous will of the people, which pronounced itself the moment they found themselves disencumbered of the Usurper's faction, and wishing that the inhabitants of those islands may participate with the rest of th Portuguese nation in the advantage conferred by the liberal institutions of the kingdom, I command you, that within the term of three days after the receipt of this, you will take the oath of allegiance, and cause it to be taken by all the civil, military, and ecclesiastical authorities of the Queen and the charter, granted by me to the Portuguese nation, proclaiming the one and the other throughout the territory under your command. You will further please to understand, that in the unexpected event of your not obeying my commands, you will be dealt with as a rebel, and will be for ever excluded from all and every amnesty which I have granted, or may hereafter grant, to those who, undeceived and repentant, come to seek shelter and protection of the legitimate Government: all which I communicate for your intelligence.

"Given in the Palace of Ramalhao, the 13th of May. "DON PEDRO, Duke of Braganza."

[*From the Courier and Enquirer.*]

IMPORTANT FROM PORTUGAL.—*Capitulation of Don Miguel and Don Carlos.*—Captain Flowery, of the ship *Moro Castle*, arrived yesterday from Havana, has kindly furnished us with a supplement to the *Diario*, which contains accounts from Spain, received in Havana from Cadiz in thirty days time. These accounts embrace official reports announcing the capitulation of Don Miguel and Don Carlos to the troops of Donna Maria. We annex translations of them.

Lisbon 27th May.—It is eleven years to-day that Don Miguel (then infant) fled from Lisbon to Santarem, to destroy the constitution and usurp the throne of his august father. To-day news has reached Lisbon of his stipulating to retire from the Portugese territory, which he has so long drenched in blood and involved in misfortune. Singular coincidence! On the 27th May, he commenced his career of crime; and on the 27th May terminated his political existence and his course of crime and outrage. At 8 o'clock, this morning an aid-de-camp of General Saldanha, arrived at Lisbon with the important news of the surrender of the army of the usurper, and immediately the intelligence spread through the capital with the rapidity of lightning. It is impossible to describe the joy which took possession of every faithful inhabitant of Lisbon. Many rockets suddenly ascended the skies—embraces, congratulations, and good wishes, passed from one to another, in every street—and no one could sufficiently express the emotions which filled his bosom. In a short time the following despatch was issued in a Supplement to No. 124 of the *Cronica Constitutional* of Lisbon.

Illustrious and Excellent Sir: I have the honor to advise your Excellency of the receipt of your despatch to-day, with two copies of the orders which your Excellency received from the government at Lisbon, as well as a quantity of proclamations published by Sr. Don Pedro Duke of Braganza. I have to say in reply to your excellency, that to avoid the further effusion of Portuguese blood, the propositions,* a copy of which your Excellency transmitted are acceded to. As Don Miguel is permitted to embark at any port, and in any vessel of the four allied nations which he may select, he chooses the port of Sines, or some other port in Algarves, and an English vessel; and I wish to know whether her Serene Higness the Infanta Donna Isabel Maria, who is in the town of Elvas, desires to accompany him. It is proper now that we proceed regularly, for which purpose I await the orders of your Excellency. I am ready to be present at any place you may appoint, if you think it will further that end. God preserve you many years.

Evora, 26th May, 1834.

(Signed) JOSE ANTONIO DE AGVEDO LEMUS,
Lieutenant General.

To His Ex. Count de Saldanha.

* The conditions will be such as the two Marshals shall agree to according to their instructions.

The Captain General of Estremadura, under date of May 26, announced that the town of Yelves has acknoweledged the authority of the Queen, Donna Maria I, and that Gurumena, Campomayor, and Oguela, were about to follow the example.

Seville, Jan. 1st, 1834—By express received at half past one o'clock this day, his Excellency the Secretary of War confirms the important news of the decisive advantages gained in Portugal, and the surrender of the Miguelite and Carlist forces; and adds, that the Pretender, in consequence of his having claimed the protection of the Secretary of the English Legation, who was at his Head Quarters, proceeded with his family to Lisbon, where instructions had already arrived from the British Government, applicable to such a conjuncture.

(Signed,) THE PRINCE OF ANGLONA.

Madrid, May 25.—Agreeably to the plan of operations agreed on between the Duke of Terceira and D. Jose Ramon Rodil, Castle-o-Branco was occupied by the Spanish troops on the 15th instant, and Thomar by the Portuguese. The Miguelites, who abandoned the (latter) city at their approach, retired a league and a half, pursued by the cavalry, to Seiseira,—a point from which they could proceed either to Santarem or Abrantes. This was the reason why the Duke of Terceira proposed to General Rodil to march upon Abrantes with the Spanish forces, and accordingly they left Castle-o-Branco and arrived at Sardea on the 20th.

From this point and on the same day, this General communicates the results of an action which took place at Seiseira on the 16th, and the news of the retirement of Don Miguel from from the strong position which he held at Santarem, in the following extract of a letter from the Duke of Terceira, dated at Golegana on the 18th.

"It appears that the action at Seiseira was decisive, for Don Miguel durst not remain in his weakened position at Santarem, but fled towards Yelves."

In the letter enclosing this extract, Gen. Rodil states, that in consequence of that engagement, he had determined to turn back from Sarceda with the division of infantry, and cross the Eagus at Malpica and Herronna, where Col. Tena had been for two days, getting the boats of that vicinity in readiness, and "if," says Gen. Rodil, "they are in order on my arrival, the van-guard will be in Spain to-morrow, and the first division on the following day."

Capture of Don Carlos and Don Miguel.

CADEZ JUNE 1.—Civil Government of the Province of Cadiz.—The Captain of the Port has just favored me with the following intelligence:

"A felucca has arrived from Ayamonte, the Captain of which says he left their night before last, bringing a letter for the Captain general of the department, and states that the Infantes Don Carlos and Miguel had fallen into the hands of the Spanish troops at Evora, having been delivered up by their own men; also that four waggon loads of silver had been captured. No other news." "LOUIS DE COIG."

I hasten to communicate this agreeable intelligence to the loyal city of Cadiz, and the other population of the Province, for their information and satisfaction. JOSE DOMINGO DE VIDART.

Cadiz, June 1, 1834.

Latest from the Mediterranean Squadron.—We have a letter before us, dated on board the U. S. Frigate Constellation, Toulon Roads, May 23d, 1834—at which time the Delaware, 74, Com. Patterson, was lying in these Roads. We are happy to add, that all were well on board those ships.—[Gazette.]

WINCHESTER JULY 9.—*Lamentable Accident.*—On Sunday evening, the stage in which Mr. Clay was traveling from Charleston towards Winchester, was overturned, near the Opequen, and Mr. Albert Humrickhouse, (only son of Mr. H. the contractor at Shepherdstown, was instantly killed. The young gentleman was seated with the driver; the tongue broke as they were descending a hill, the horses ran out of the track, and the stage was overturned, Mr. H. falling under it. His neck was broken and his body literally crushed. This young gentleman was well known to travellers on the route for his amiability and courteousness, and his sudden and appalling death has excited general regret. Mr. Clay was slightly injured.

[*From the Chinese Repository for February.*]

DESCRIPTION OF THE CITY OF PEKING.

Peking, the capital of the Chinese empire, stands on a vast plain, in the interior of Chih-le, (or Pih-chih-le), the most northern province of China Proper. It is situated in latitude 39 deg. 55 min. north, and in longitude 116 deg. 45 min. east from Greenwich, and about 3 deg. 30 min. east of Canton. On the east and south, the low and sandy plain extends farther than the eye can reach; on the west and north, hills begin to rise above the plain only a few miles from the walls of the city; and at a distance beyond, the prospect is bounded by mountains which separate the province of Chih-le from Mantouch.—Viewed from the summit of those mountains, the city appears as if situated in the midst of a thick forest; this effect is produced by the clusters of trees that cover the villages, temples, and numerous cemeteries which encompass the capital. From the great wall, which passes along upon this ridge of mountains, Peking is about fifty or sixty miles distant; and a little more than a hundred from the gulph of Chih-le. The Pih-ho, rising in the north beyond the great wall, flows within twelve miles of the city on the east, and then passes down in a south-east direction by Teen-tsin into the sea. Several smaller rivers, issuing from the mountains on the north-west, water a part of the plain; and one of them, which is called the Tung-hwuy, descends to the city and supplies its numerous canals and tanks; it then flows eastward, and uniting with one of the larger rivers, forms an extensive water communication, by which provisions are conveyed to the capital.

Peking, or Pih-king, "the northern capital," is regarded by the Chinese as one of their most ancient cities; its early history, however, is involved in obscurity. The imperial court has been repeatedly removed from one province to another, having been held in Shen-se, Ho-nan, and in other more southern provinces. The first monarch of the Yuen dynasty, who ascended the throne in A. D. 1279, kept his court for several years at the capital of Shan-se; but subsequently removed it to to Shun-teen-foo, the principal department of the province of Chih-le, and the present site of Peking. Hung-woo, the first emperor of the Ming family, established the seat of his government at Keanh-ning-foo, the principal department of the province of Keang-nan, and hence styled Nan-king, "the southern capital;" but Yung-lo, the third monarch of the same line, removed it to Peking, where it has remained to the present time. On native maps the city is not usually denominated Pih-king, but King-sze, "the residence of the court." Since the foundations of the city were first laid, it has undergone many changes in its extent and form. For a long period it was surrounded only by a single wall, and had nine gates, and hence, even to the present day, it is sometimes spoken of as "the city of nine gates." At a later period it was extended towards the south by a new wall, leaving the former southern wall between the old and new city.—At the present time, the northern division is called nuy-ching, "the inner city," and the southern, wae-ching, "the outer city;" and as in the case of Canton, the northern part is frequently denominated the Tartar city. The new wall which surrounds the outer city, or southern division of Peking, has seven gates.

The northern division of the city is nearly in the form of a parallelogram; of which the four sides face the four cardinal points; it extends from north to south about four miles, and from east to west three, having an area of twelve miles square. The southern division extends from east to west nearly six miles, and two and a half from north to south, occupying an area of about fifteen miles. Thus the entire circumference of Peking may be estimated at nearly twenty-five miles, and its area at twenty-seven square miles.

The walls of the northern division of the city, according to Barrow, are thirty feet in height, twenty-five feet in breadth at the base, and twelve at the top. The inclination is chiefly on the inner side; the outer side is smooth and nearly perpendicular. Near the gates, the walls are faced with marble or granite, but in other places with large bricks laid in mortar which is made of lime and clay, and "in process of time becomes almost as hard and durable as granite." The intermediate space between the inner and outer surfaces of the wall is filled with the earth and clay that was dug from the ditch which surrounds the city. On the outer side of the walls, square towers projecting about fifty feet from the line of the wall and of the same height with it, are built at the distance of about sixty yards from each other. Two such towers, of equal height with the walls, stand one on each side of every gate, and are connected in front by a semi-circular fort. The arches of the gates are strong, being built of stone; they are surmounted by large wooden buildings, several stories high. On the inside of the wall, at the side of every gate, also near the middle of the interval between the gates, and at the several corners of the city, there is a species of esplanade for ascending to the top of the wall. A ditch surrounds the whole city, which is supplied from the waters of the Tung-hwuy river: with this ditch others are connected, by which the same waters are conducted to all the principal parts of this great metropolis.

To the stranger approaching the city of Peking, its lofty walls and towers give it an imposing appearance, not unworthy the capital of a great empire; but when he comes within the walls, his admiration is turned to surprize. He beholds there none of those beautiful and superb edifices, none of those neat and elegant streets, which are the principal ornament of European cities; instead of these, he sees in various directions irregular assemblages of houses, shops and temples. The style of the architecture, and the general appearance of the buildings, is the same as in Canton. Most of the streets are indeed sufficiently wide and straight; but they are not paved, and, in general, their bad condition is a just subject of complaint, in this as well as in other Chinese cities. As, however, the front of every shop in the business streets, has an arrangement peculiar to itself and before it, on either side, a perpendicular signboard as high as the roof, covered with inscriptions in large gilt or painted letters, describing the wares within and the reputation of the dealer, and often hung from top to bottom with flags and ribbons; this diversity in the arrangement of merchandize, together with the profusion of gaudy decorations and the bustling crowd by which he is surrounded, divert the attention of the spectator, and cause him to forget in some degree the more disagreeable parts of the scenery around him.

The smaller streets are quiet and free from crowds; but those which lead to the principal gates are constantly thronged with people. The following description by an eye-witness will serve to convey some idea of the scene they often exhibit. "The multitude of moveable workshops of tinkers and barbers, cobblers, and blacksmiths; the tents and booths where tea, and fruit, and rice, and other vegetables, were exposed for sale; with the wares and merchandize arranged before the doors of the shops, contracted the spacious street to a narrow road in the middle. The processions of men in office attended by their numerous retinues bearing umbrellas and flags, painted lanterns, and a variety of large insignia of their rank and station; trains accompanying, with lamentable cries, corpses to their graves, and others conducting brides to their husbands with squalling music; the troops of dromedaries laden with coal from Tartary; the wheel-barrows and hand-carts loaded with vegetables; occupied nearly the whole of this middle space. All was in motion; the sides of the streets were filled with people buying and selling and bartering their different commodities. The buzz and confused noises of this mixed multitude, proceeding from the loud bawling of those who were crying their wares, the wrangling of others, and the mirth and laughter which prevailed in every group, could scarce be exceeded. Pedlars with their packs, and jugglers, and conjurors, and fortune tellers, mountebanks and quack-doctors, comedians, and musicians, left no space unoccupied." Such, according to Mr. Barrow, is the scene exhibited in a street in Peking. The crowd of people, and the strange sights and sounds on the occasion described, was probably greater than usual; but he has given too correct a representation of what may sometimes be witnessed even in the surburbs of Canton, to allow us to accuse him of much exaggeration.

Soon after the present dynasty took possession of the throne of China, in 1644, the Government, designing to occupy the northern division of the city as barracks for its troops, purchased the houses of the private owners and gave them to the Tartars who had served in its wars; but these brave soldiers, less skilled in the arts of peace than the people they had subjugated, were soon obliged to sell them to the Chinese. In consequence of this, all the principal and many of the smaller streets, with the exception of those near the imperial palace, are owned and occupied by Chinese; and the Tartar soldiers have been compelled to take up their abode in the lanes and alleys near the walls of the city. Thus far we have spoken of the city as a whole; we now proceed to survey its principal parts.

The northern division of Peking consists of three inclosures one within another, each surrounded by its own wall. The first contains the imperial palace and the abodes of the different members of the imperial household; the second was originally designed for the residence of the officers and attendants of the court, but is now occupied in part by Chinese merchants; the third consists of the remaining space inclosed by the outer walls, which have already been described.

The first inclosure, which is called *the forbidden city*, being the seat of 'the dragon's throne,' the place from which emanates the authority that governs one-third of mankind, is the most splendid as well as the most important part of Pekng. According to the notions of a Chinese, all within its walls is gold and silver. "He will tell you," says Mr. Barrow, "of gold and silver pillars, gold and silver roofs, and gold and silver vases, in which swim gold and silver fishes."

It is situated nearly in the centre of the northern division of the city. It is an oblong parallelogram about two miles in circumference, and enclosed by a wall of nearly the same height and thickness as that of the outer wall of the capital. This wall is built of polished red brick, and surrounded by a broad ditch lined with hewn stone, and covered with varnished tiles of a brilliant yellow, which give it the appearance, especially when seen under the rays of the sun, of being covered with a roof of gold. On each of the four sides is a gate consisting of three arcades or avenues, surmounted by a tower. A tower also stands at each corner of the wall. The interior of this inclosure is occupied by "a suite of court yards and apartments which seem to vie with each other in beauty and splendor." The terraces and glacis are covered with large bricks, and the walks that lead to the great halls, are formed of large slabs of gray and white stone. It is divided into three parts, the eastern, middle, and western. The middle division contains the imperial buildings, which are subdivided into several distinct palaces, each having its particular name and destination. "There reigns," says father Hyacinth, "among the buildings of the forbidden city, a perfect symmetry both in the form and height of the several edifices and in their relative position, indicating that they were built upon a regular and harmonious plan." We will notice a few of the most remarkable objects it contains, beginning at the southern part of the middle division.

1. Woo-mun, 'the meridian gate.' Before this gate, on the east, is a lunar, and on the west, a solar dial, and in the tower above it a large bell and gong. Public officers of both the civil and military departments, enter and leave the palace by the eastern avenue; none but the princes of imperial blood, are permitted to pass the western, and no one but the emperor the southern avenue. Whenever he goes out or returns through it, the bell is rung and the gong struck. When his troops return in trijumph from war and come to present their captives, the emperor places himself here to perform the ceremony of receiving the prisoners. Here also, are distributed the presents which the emperor makes to foreign princes and their ambassadors, as well as to his own vassals. After passing this gate the visiter enters a large court, through which runs a small canal, over which are five bridges adorned with balustrades pillars, steps, and figures of lions and other sculptures, all of fine marble. He next enters a beautiful court terminated on the right and left by gates, porticoes, and galleries adorned with balconies supported on pillars.

2. Tae-ho mun, 'the gate of extensive peace.'—This has five avenues, and in other respects resembles the woo-mun, or meridian gate; it is a superb building of fine white marble. The height of the basement is twenty feet, and of the whole edifice, according to father Hyacinth, one hundred and ten. The ascent to it is by five flights of forty two steps each, bordering with balustrades, and ornamented with tripods and other figures in bronze. The central flight is very broad, and is reserved for the emperor alone; princes and officers of the first rank enter by the two next, and inferior officers by the others. Here the emperor on the first day of the year, on the anniversary of his birth and several other occasions, receives the congratulations and respects of his officers, who prostrate themselves to the earth before him and strike the ground with their foreheads.

3. Chung-ho teen, "the hall of perfect peace."—This is the hall of audience where the emperor comes to examine the implements prepared for the annual ceremony of ploughing; and where also the genealogical tablets of his ancestors are presented to him.

4. Puan-ho teen, "the hall of secure peace." In this the emperor gives a banquet to his foreign guests on new-year's day; and the authors of the

biography of his deceased father come in pompous ceremony to this hall to present to him their work. After ascending three flights of steps, and passing another gate, the keen tsing mun, the visiter sees before him,

5. Keen tsing kung, "the tranquil palace of heaven," i. e. of the emperor. This is a private retreat, to which no one can approach without special permission. To this palace the emperor repairs whenever he wishes to deliberate with his ministers upon the affairs of state, or to see those who present themselves as candidates for office or for advancement. It is described by Timkowski as "the loftiest, richest, and most magnificent of all the palaces. In the court before it is a small tower of gilt copper, adorned with a great number of figures which are beautifully executed. On each side of the tower is a large vessel likewise built of copper, in which incense is burnt day and night. It was in this palace that Kang he, in the fiftieth year of his reign, instituted a grand festival, to which every individual whose age exceeded sixty years, whether a civil or military officer, or a private citizen, was invited. Tents were erected in front of the palace, and tables spread for many thousands. The sons and grandsons of the emperor themselves waited upon the guests. At the end of this generous entertainment, presents were distributed adapted to the condition and rank of those to whom they were given. Keen-lung also, in the fiftieth year of his reign, made a similar feast. The number of guests was twice as great as on the former occasion. Those whose age exceeded ninety years, were admitted to the table of the emperor, who addressed them with kindness and afterwards bestowed on them magnificent presents.

6. Keaou-tea teen: This hall resembles in many respects the chan-ho teen; it contains twenty-five of the Emperor's seals; ten others are kept at Moukden.

7. Kwan ning kung, 'the palace of earth's repose,' i. e. of the empress, is the usual abode of 'heaven's consort.' This opinion, that keen and kwan, the emperor and empress, are heaven and earth, is a favorite dogma of the reigning dynasty, and is sedulously inculcated in its state papers. Beyond this palace stands the

8. Kwan ning mun, 'the gate to earth's repose,' which admits the visiter to the

9. Yu hwa yuen, 'imperial flower garden.' This is laid out into beautiful walks designed for the use of her majesty, who, being of Tartar origin, is not deprived of this pleasure, as are the Chinese ladies, by being crippled with small feet. The gardens are filled with elegant pavilions, temples, and groves, and interspersed with canals, fountains, lakes, and beds of flowers. Two groves, rising from the bosom of small lakes, and another crowning the summit of an artificial mountain of rugged rocks, add much to the beauty of the scene. At the east of this mountain is a library, said to contain a complete collection of all books published in the empire.

10. Shin-woo mun; this gate stands beyond the imperial flower garden, and forms the northern entrance to the forbidden city. We have now completed our survey of the central division of the kiu chin; the eastern contains fewer objects of interest.

11. Nuy-ko, 'the council chamber.' This term, nuy-ko, is used to denote not only the cabinet of the emperor, but also the hall in which that body holds its sessions. It is situated near the southern wall; and beyond it, towards the east, is the nuy-koo, the imperial treasury.

12. Chuen-sin teen, 'the hall of intense mental exercises.' It is situated at some distance northward from the nuy-ko. Offerings are brought and sacrifices presented here to "the deceased teacher," Confucius, and likewise to our ancient sages.

13. Wan-yuen ko, the imperial library, or, more literally, 'the hall containing the literary abyss:'—this is situated near the ebuen-sin teen, and consists of several buildings and suites of rooms, which, containing a large compilation of the national literature, Sze koo tseuen shoo, 'the complete books of the four treasuries' (or libraries,) presents the largest and most complete literary collection in the empire. Farther north, in this division of the prohibited city, are situated several imperial buildings and the palaces of princes: and also

14. Fung-Seen teen, a temple, to which the emperor comes to "bless his ancestors," whose names are written on tablets deposited here. Before the day when any great sacrifice is to be offered, and when he is about to leave the city, as well as when he returns, the emperor pays a visit to this temple; likewise, at the commencement of each of the four seasons of the year, and on the first and fifteenth days of every month, offerings are here presented, and during each day are thrice repeated. In the western division of the prohibited city, beginning again at the south, we notice only a few of the principal objects.

15. Nan-heun teen: this hall stands near the southern wall, and in it are collected the portraits of the sovereigns of preceding dynasties, and likewise tablets, and broad rolls, containing the portraits of eminent scholars and sages; these are arranged according to the degree of merit attributed to each.

16. Woo-yeing teen; this hall contains his majesty's printing establishment; it has a bindery and buildings in which the blocks used in printing are preserved.

17. Nuy-woo foo; here are held the sessions of a court of commissioners, or controllers, which "has among its prerogatives the regulation of receipts and expenditures of the court, its sacrifices and feasts, rewards and punishments, and all that relates to the instruction of the younger members, &c. This establishment, together with the principal magazines of the crown, which are under its superintendence, is situated on the wall on the west side of the city.

18. Ching hwang meaou, 'the temple of the guardian deity of the city,' which stands at the north-west corner of the inclosure. In the north-eastern part of the same division, are six palaces which are occupied by the females of the emperor; they are situated like those destined for the residence of the princes, in the eastern division.

We have now completed our brief survey of the prohibited city, which is regarded by the Chinese as the most sacred and awful of places. In their estimation it is also the most magnificent. The glittering yellow and various ornaments of the roofs of its palaces and other edifices, and the brilliant colors and abundant gilding applied to the interior, give it, in their eyes, a dazzling glory; but were we to seek in their convenience of construction, or too much that may seem elegant or grand to one whose taste has been formed according to any of the rules of architecture adopted by the people of the west, we should doubtless meet with disappointment.

ST. PETERSBURGH, MAY 10.—The journals contain very long accounts of the ceremony of May 5th, in the Palace Church. The Emperor and Empress, who were accompanied by the Imperial Prince, and the other Members of the Imperial Family, having taken their places on the Throne, the prayer, composed for the occasion was read, after which the Emperor took the Prince by the hand and led him to the desk on which the New Testament was placed, when his Imperial Highness read, and then subscribed the oath:—

"Faithfully to serve the Emperor my father in all things, even to the last drop of my blood; and to maintain to the best of my power all the rights and privileges of his Imperial Majesty; and, as successor to the Throne of all the Russias, as well as of Poland, and Finland; and to maintain in full force, and unimpared, all the ordinances respecting the successor to the Throne and family institutions which are contained in the laws of the Empire, as I shall have to answer to God, in his last Judgment. O Lord God, the Father, and the King of Kings, teach, enlighten, and guide me in the great work that awaits me; send down thy Holy Spirit that I may comprehend what is pleasing in thy sight, and conformable to thy Commandments. Into thy hands I give my heart. Amen." The Prince read at first with a firm and loud voice, but when he invoked the King of Kings his voice trembled, and was interrupted with tears. Several times he began again, but could not proceed. The conclusion was pronounced with audible sobbing. The emotion of the young Prince affected all who witnessed it. After he had signed the oath the Emperor embraced him with the utmost affection, kissed him, and led him to the Empress. The Prince was going to embrace her, but the Emperor anticipated him, embraced the Empress, and then folded both mother and son in his arms. This affecting scene deeply moved the hearts of all present; all shed tears of emotion, and implored the blessing of God on the August Family to which Russia owes its happiness, its prosperity and its glory. A solemn *Te Deum* followed, and a salute of artillery announced to the capital the conclusion of the important solemnity. The religious ceremony being concluded, the Prince was introduced to actual service in the ranks of the Russian Army in the Hall of St. George an altar was erected before the throne, on which were the Cross and the Gospels. The colors of the Guards, those of Borodino, Liepsic, Paris, and Varna, and the standard of the Atamarit regiment of Cossacks of which the Prince is Colonel, were suspended near the throne. Around were the brave men, the Imperial guardian, the representatives of the glory of Russia; and on the two sides of the hall the pupils of all the military institutions, the flower of the Russian nobility, the hopes of the nation. The Grand Duke Michael commanded. When the procession entered the hall, a military march was performed, and on the entrance of their majesties the national hymn, "God save the Emperor," struck up. Prayers having been performed, the Emperor led the Prince to the altar, where he took the oath "to serve with fidelity and zeal his Majesty the Emperor, according to all the military regulations, to be always ready to oppose the enemies of his Majesty and of the empire, and on all occasions to act as becomes a brave, obedient and loyal soldier." The military then presented arms, the music played, but was overpowered by the loud hurras of the troops, in return to the gracious salutation of the Emperor. Their Majesties, with the imperial family and suite, retired. So concluded the festivities of this happy and memorable day.

The imperial Prince addressed, on the 4th, a letter to General Count Essen, Governor of St. Petersburg. He says that having attained his majority, and taken the oath of fidelity to his father and to the country, he shall consider it as his most sacred duty to prepare himself, when the will of the Emperor shall allow him, to serve him and Russia. It is his wish to mark this important day of his life by something useful, and to give some proof of his gratitude to the place where he passed the years of his childhood, where he learned to love Russia, and where he had taken his sacred oath. He, therefore, requests to cause 50,000 rubles, which he sends him, to be distributed among those of the poorer inhabitants of St. Petersburgh who most need assistance, and most deserve it.

The Twin Brothers.—The Count de Ligniville and Count D' Autricourt, twins, descended from an ancient family in Lorraine, resembled each other so much, that when they put on the same kind of dress, which they did now and then for amusement, their servants could not distinguish one from the other. Their voice, gait and deportment were the same, and these marks of resemblance were so perfect, that they often threw their friends and even their wives into the greatest embarrassment. Being both captains of light horse, the one would put himself at the head of the other's squadron without the officers ever suspecting the change. Count D' Antricourt having committed some crime, the Count de Ligniville never suffered his brother to go out without accompanying him, and the fear of seizing the innocent instead of the guilty, rendered the orders of arrest of no avail. One day, Count de Ligniville sent for a barber, and after having suffered him to shave one half of his beard, he pretended to have occasion to go into the next appartment, and put his night gown upon his brother, who was concealed there, and taking the cloth which he had about his neck under his chin, made him sit down in the place which he had just quitted. The barber immediately resumed his operation, and was proceeding to finish what he had begun, as he supposed, but, to his great astonishment he found that a new beard had sprung up. Not doubting that the person under his hands was the devil, he roared out with terror and sunk down in a swoon on the floor. Whilst they were endeavoring to call him to life, Count D' Autricourt retired again into the closet, and Count de Ligniville, who was half shaved, returned again to his former place.—This was a new cause of surprize to the poor barber, who imagined that all he had seen was a dream and he could not be convinced of the truth until he beheld the two brothers together.

The sympathy that subsisted between the two brothers was no less singular than their resemblance.—If one fell sick, the other was indisposed also; if one received a wound the other felt pain; and this was the case with every misfortune that befel them; so that, on that account, they watched over each other's conduct with the greatest care and attention. But what is still more astonishing, they both had often the same dreams. The day that Count D'Autricourt was attacked in France by the fever of which he died, Count de Ligniville was attacked by the same in Bavaria, and was near sinking under it.—[Paris Journal.]

The public will be glad to hear that their favorite writer of Eastern Tales is about to publish another story of the land of romance—we allude to the forthcoming Oriental novel, by the author of "Zohrab and "Heji Baba" (Mr. Morier) to be entitled, "Ayesha, the Maid of Kars."

SUMMARY.

Cholera on the Mississippi.—The Randolph (Tennessee) Recorder of the 21st June, says:—"This desolating pestilence still traverses the lower part of the Mississippi. Several boats have lately passed up from New Orleans, having buried from 6 to 15 passengers. The Kentuckian passed up last Tuesday, having buried 18, principally Dutch emigrants. The disease breaks out and confines itself almost exclusively among crowded deck passengers, who neglect all necessary precautions of cleanliness, and against exposure to the burning sun and night air.

American Skill.—We have just examined the binding of an edition of Shakespeare, and of a copy of Rogers's Italy. It is green and gold, and done by two young book binders of this city, *H. & H. Griffin*, in a manner that reflects great credit upon their skill, and is equal to any thing we are in the habit of seeing from London or Paris. Their bindery is No. 33 Ann street.

Washington's Manuscript Papers and Books.—An act was passed at the late session of Congress appropriating $25,000, for the purchase of "the manuscript papers, and a portion of the printed books of General George Washington." These papers are to be deposited in the Department of State.

Fortifications, Light Houses, &c.—Among the appropriations made for these objects by Congress, are the following in this State:

For repairing Fort Columbus and Castle Williams, (Governors Island)	$50,000
For a fort on Throg's Neck East river,	100,000
For a light house on a proper site at or near the mouth of Esopus creek and near Saugerties,	$5,000
For beacon light on the piers at the mouth of Genesee river and Sodus bay,	$4,000
For a light-house or beacon light on one of the piers at the harbor of Oswego, on Lake Ontario,	$3,666
For placing four lights on the following points in Hudson's river, viz. one near Van Wie's point, one near Castleton, one on the island near New Baltimore, and one at Kinderhook.	$600
For a beacon light at the end of the pier at Silver creek, in Lake Erie,	$2,000
For a light-house on a proper site at the mouth of Oswegatchie, a tributary stream of the St. Lawrence,	$5,000
For a light-house on the flats in Hudson's river, above Stuyvesant's landing in the place of the one carried away by the ice,	$5,000

Improvement of the Hudson River.—According to the recent act appropriating $70,000 for this purpose, the improvement is to be made in conformity with a "plan submitted to the House of Representatives by the Department of War in March, 1832."

Fort Adams.—The work at this important fortress was resumed on Monday last—nearly 400 laborers are now daily employed.

Great Breach in the Delaware and Raritan Canal.—We copy the following from the Northern Liberties News Room Books:—

"About 4 o'clock on Wednesday afternoon a most extensive breach occurred in the Delaware and Raritan Canal, directly where it crosses the Assaussink creek. It was occasioned by the sudden closing of the lower lock gate, near Lamberton, which was done for the purpose of preventing a break that was anticipated at that point; it caused the upper water to rise suddenly several feet, and bursted down the eastern embankment, to the distance of about 80 yards, and washed out to the depth of 10 or 15 feet below the level of the canal. The creek and swamp adjoining is filled up with sand and gravel for an acre or two. It is estimated that it will cost between two and three thousand dollars, and will stop the navigation for a month or more."

We learn that a breach did occur near Lamberton, on the same afternoon.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.
J31 6t

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examin these Cars; a specimen of which may be seen on that part o he New-York and Harlem Railroad, now in operation.
J25 tf

RAILROAD CAR WHEELS, BOXES AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m19

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baldimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m25

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1/2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of	1 inch by	1/4 inch,	*Flat Bars* in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit
200 do.	1 1/2 do.	1/4 do.	
40 do.	1 1/2 do.	1/8 do.	
800 do.	2 do.	1/4 do.	
800 do.	2 1/2 do.	1/4 do.	

soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2 1/4, 2 3/8, 2 1/2, 3, 3 1/2, 3 1/4, and 3 1/2 inches diameter for RailwayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d7 1meowr

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecing the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other decription of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most compleatly adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

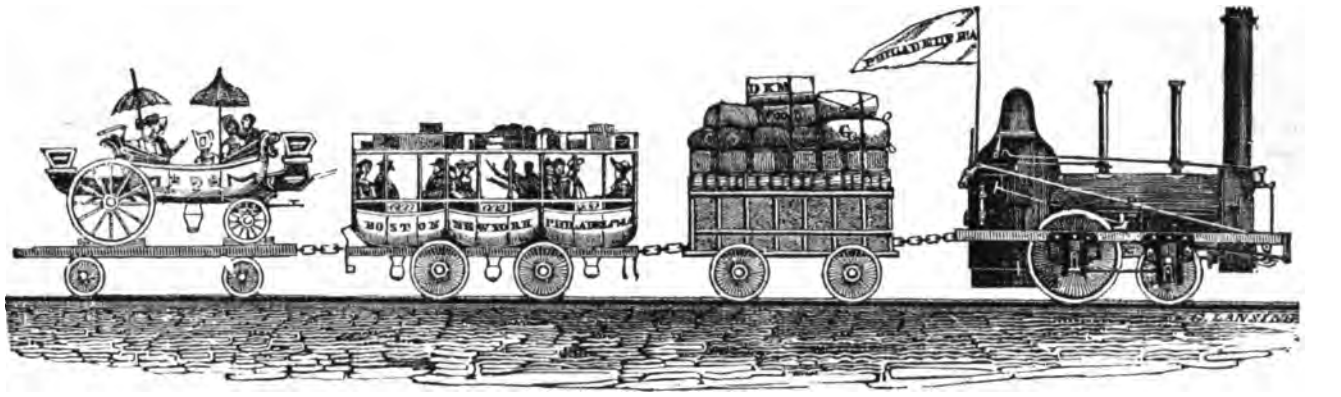
Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for layin out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norrist. Railroad
ml 1y



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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JULY 26, 1834.

We continue in this number the list of Railroads, and shall in the next complete it, as far as we at present have the means, together with a list of Canals.

NEW-YORK AND ERIE RAILROAD.—We understand that the surveys of this road are progressing rapidly, and that the route is found to be more favorable than was anticipated. It is greatly to be desired that this important work should be commenced at an early day. This city, as well as the great West, is particularly interested in its accomplishment.

IMPROVEMENTS IN VIRGINIA.

Petersburg, July 13, 1834.

To the Editor of the Railroad Journal.

SIR,—In your Journal, of 5th inst., I observe an article under the signature of H. N. C., in which it is mentioned that, "there are two works in Virginia of the most useful and important character, but which will not be undertaken for some time yet to come, on account of the want of energy, or interest, of the citizens of that section of the country in their completion. They are railroads, one from Crk. Landing to Fredericksburg, (a little over 10 miles,) and the other from Fredericksburg to Richmond, (about 60 miles.)" As I agree with you that Virginia has done too little towards the improvement of her natural advantages, I am unwilling she should be deprived of any credit to which her exertions may entitle her, and therefore beg leave to inform your correspondent, through the medium of your columns, that a party of engineers, under the direction of Moncure Robinson, Esq., are now engaged in the location of the railroad from Richmond to Fredericksburg, a portion of which will be put under contract during the present year, and there is every prospect that the work will be completed as speedily as possible.

A VIRGINIAN.

PROGRESS OF STEAM NAVIGATION WITH INDIA.—A steam voyage from India to England, by the Red Sea, seems at last to be really on the eve of taking place. The steamer Forbes has been engaged to start from Calcutta for Suez in the beginning of the present month, the Hugh Lindsay having been pronounced unfit for the purpose. The whole expense, except that of the coals, is to be borne by the Indian Government; while the Calcutta Steam Navigation Committee, will receive all the profits on passengers and all kinds of freight, except letters, the postage of which will be reserved by the Government.—[Mechanics' Magazine.]

A speed of forty miles an hour, with a light load, has been obtained upon the Manchester railway; and Mr. G. Stephenson, the engineer, has stated his opinion than an engine might be constructed to run 100 miles within the hour, although he acknowledges that "at that rapidity of motion the resistance of the atmosphere would be very considerable." Engines are now made with eight times the power of the Rocket, yet with little more weight resting on each rail, the load being equally divided upon six wheels, and the machinery placed in a more advantageous situation than formerly. The tubes of the boiler are made smaller, and more numerous, and of brass instead of copper. The last engine put on the railway ran 23,000 miles with the most trivial repairs, making every day four or five journeys of 30 miles each.—[English paper.]

NEW INVENTION.—A blacksmith in Virginia has invented a machine for striking, which enables blacksmiths to dispense with a striker, and at the same time perform, with the aid of one of these machines, double the amount of work which they can with the aid of one of the best strikers. The machine is propelled by the foot in the ordinary manner of turning a lathe. The inventor has secured a patent right.

DIFFUSION OF KNOWLEDGE.—A royal Sardinian edict was promulgated, so lately as 1825, which forbade every person from learning to read or write, who could not prove the possession of property above the value of fifteen hundred livres. To become a student, the possession of an income of the same sum is necessary.

PINE APPLE CLOTH.—A beautiful specimen of fine cloth, made from the fibres of the leaves of the pine apple, from Manilla, resembling the finest linen cambric, was presented by Miss Eliza Schroeder, at the late Horticultural Exhibition in Baltimore.

We copy the following from the forthcoming number of the Mechanics' Magazine,—as also the article at page 454, on the "Art of Brewing."

T. Ewbank's Hydrostatic Safety Valve and Gauge, for Steam Boilers. [Communicated by the Inventor.]

SIR,—In accordance with your request, I forward a brief description of the Hydrostatic Safety Valve, premising that a more perfect account of it may be seen in the "Journal of the Franklin Institute" for January and July of last year, (vols. 9 and 10.)

There appears to be a prevailing though erroneous opinion, that steam boilers are seldom, if ever, exploded by an excessive pressure of steam. Numerous persons suppose these disasters to be *invariably* owing to a deficiency of water within them at the time; hence they consider all improvements in the safety valve, or the application of other devices for a similar purpose, as having a tendency to increase the risk of explosion, by promoting negligence in the attendants. It is sufficient to observe, in answer to reasoning of this description, that it is equally calculated to prevent all improvements whatever in the steam engine. Had such arguments been listened to 120 years ago, this noble prime mover of the arts might still have been confined to its original purpose of raising water; and each one attended by a person, upon whose attention in alternately opening and closing the valves, the continuance of its motion depended. Such objections were particularly calculated to prevent the introduction of the important improvement of Potter, who, it is said, had a disposition to skulk, or "*scog*," (as it was there termed,) which led him to devise a simple contrivance, which changed the whole character of the steam engine—for by it the engine no longer depended upon an attendant for the continuance of its motion, but became in a manner self-acting, and with a regularity infinitely superior to its previous movements. His device he called a "scogger."

Explosions of steam boilers are not attri-

butable to *one* cause: there are several. A deficiency of water is a fruitful one; excessive pressure of steam is another; a third may be found in the defective construction of a boiler; and where several are connected together, their not being *heated uniformly* is another. Numerous examples of each of these might readily be furnished. I believe there are not wanting instances where the attending engineers have been blamed, when the real cause was to be found in one or both of those last mentioned.

The importance of the safety valve is universally understood; without it no boiler could ever be secure. Upon it depends the very existence of the steam engine; for without the safety valve, as Mr. Galloway justly observes, "steam would, long ere this, have been abandoned as a most dangerous and ungovernable agent." Every person can readily perceive, that however strong a boiler may be, if the force within it be not limited it must be rent asunder; hence the design of safety valves, which are intended to open, and discharge the excess of vapor, whenever its elastic force exceeds the prescribed limits. In the case of a steamboat, the lives of the passengers and safety of the boat depend in a great measure upon the right construction and proper use of this part of the steam engine.

One of its most essential attributes consists in its being properly loaded; and a provision to prevent this load from being increased. By the arrangement of the ordinary valve, it is difficult, if not impossible, to accomplish this; the load *may* be increased indefinitely, either by augmenting the weight directly on the lever, or by moving it further from the fulcrum: how frequently and fatally this has been done, may be abundantly seen in the history of explosions. There are also other defects in the ordinary valve, though less obvious to common observers, such as the indirect mode of obtaining the pressure upon it, through the intervention of the lever and its joints, by which the centre of pressure, instead of being directly on the centre of the valve, becomes more or less on one side, which prevents it from being raised perpendicularly, and causes it to adhere to its seat. The friction of the stuffing-box, through which the valve rod passes, and also that of the joints, both of it and the lever, which from rust, &c. is often considerable. These and other defects are so great, that were it not for the mercurial gauges used with low pressure boilers, (and they are inapplicable to those of high pressure,) no accurate knowledge of the pressure of steam could be ascertained by safety valves as ordinarily used.

These defects are supposed to be entirely avoided in the valve now submitted to your examination.

Its position is the reverse of the ordinary one; that is, instead of opening upwards, it is made to open downwards. For this purpose it is raised above the boiler, and connected to it by a pipe. By this arrangement you will perceive that the pressure requisite to keep the valve closed must be exerted in an upward direction. To attain this, and at the same time *limit* the pressure, a simple device is adopted, which will be understood by supposing an empty vessel (a bucket, for example,) placed with its bottom down, into water, or any other fluid; if depressed in that position, the power required to do so will be in proportion to the area of its bottom and the depth of its immersion; but if forced down till its upper edge becomes level with the surface of the fluid, the power required to keep it there, or in other words, the force which the vessel exerts in a contrary direction, will then be at its maximum; for if further depressed, the fluid would run into and sink it, and destroy its buoyancy altogether.

Suppose the vessel containing the water, which is rather larger in diameter, but of less depth, than the bucket, (that the fluid may never be permitted to run into the latter,) be placed immediately under the safety valve, and firmly secured to that part of it containing the seat of the valve. Let the bucket be placed in it in the position as before; and a rod, extending from the centre of its bottom to the centre of the valve; then, if the outer vessel be filled with water, the force tending to raise the bucket against the valve, by means of the rod, will be as before mentioned, at its maximum; nor can it be increased: consequently, the elastic force of the steam in the boiler can never rise higher than what is equivalent to overcome this pressure.

The length of the rod is such as to admit a space of two or more inches between the bottoms of the two vessels, in order to allow the valve to open that distance.

The foregoing is a brief description of the *principle* adopted in this valve; and which may be more clearly understood by the annexed cuts:

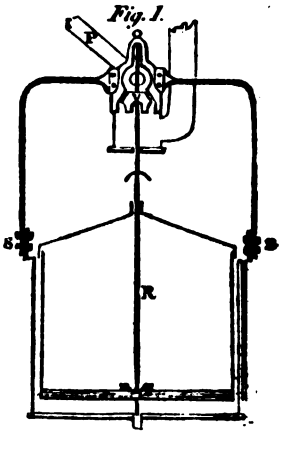

Fig. 1 represents this valve in section with the vessels by which the hydrostatic pressure is made. The outer one is enlarged at the top by a rim, from which a pipe descends, which prevents any surplus fluid from flowing over it or entering the inner one. It is firmly secured to the inverted valve seat by the rectangular rods which are bolted to the rim at S S. V is the valve, kept up against its seat by the rod R, the upper end of which enters a countersunk hole in it; and the lower end in a similar cavity in the centre of the bottom of the vessel. The rod being tapered at its ends, presses only on its central points. The inner or floating vessel is furnished with a cover, to prevent condensed steam from falling into it when the valve is opened. The rod passes through the centre of this cover, a few inches above which an inverted cup is soldered to the rod to cover the opening. A short tube, with a branch attached to it, is connected to the under part of the valve seat, to take off the waste steam when blowing off. The communication between the valve and the steam in the boiler is by means of the pipe P, which may either be connected to the boiler or the steam pipe. To prevent any friction arising from the inner or floating vessel touching the sides of the other, a short rod is attached to the centre of its bottom on the under side, which enters a corresponding cavity drilled into the bottom of the other.

This apparatus, unlike the ordinary safety valve, combines in itself both the valve and gauge, with its tell-tale; and this gauge is applicable to steam of *every degree of elastic force.*

Fig. 2. is an exterior view, and which also shows the gauge; which is a glass tube connected to the cock at the bottom of the outer vessel, and communicating with the water in it. It is open at top, and protected by a metallic case with a slit its whole length, to allow the height of the water to be seen. This case is graduated, so that when it is wished to ascertain the strength of steam, the cock is opened, and the water allowed to subside until the steam begins to open the valve, when the mark on the case, opposite the surface of the fluid in the tube, indicates the pressure; and this it will do to the fraction of an ounce.

In this valve there is no friction to be overcome. No lever, stuffing box, weight, bolts or joints, to obstruct its operation. *It cannot be overloaded.* The common valve is very liable to adhere to its seat, when not frequently moved, by the accumulation of saline or other matter upon it, but the elevation of this valve above the surface of the boiler, and its inverted position, prevents this from taking place. Moreover, a portion of condensed steam constantly collects above it, and occasionally oozes out, thus cleansing the surface and preventing the formation of any matter upon it whatever. One has been attached to a high-pressure boiler in this city for three years; and not an hour's labor has been expended upon it during that time; nor has it once ceased to operate with perfect accuracy—the steam always blowing off as soon and as long as its tension exceeded the prescribed limits.

It is respectfully submitted to owners and captains of steamboats, whether the adoption of this valve would not prevent explosions that arise from *one* acknowledged source—an excess of steam: and at the same time put to silence the complaint of the public on that subject. Very respectfully,

THOS. EWBANK.

P. S.—One of them is at Mr. Worrall's Foundry, Elm Street, New-York.

LIST OF RAILROADS IN THE UNITED STATES.

(Continued from page 433.)

Boston and Worcester Railroad.—This Company was incorporated June 22d, 1831, with a capital stock of $1,000,000. Surveys had previously been made by the authority of the Legislature of the State, with a view to determine its practicability and expense, the result of which was altogether unfavorable. In 1831, however, the Company commenced their approximate location, which was completed in November of the same year, and shortly after part of the line was put under contract. The line, as now laid down, leaves Boston not far from the foot of the Common, and after passing over the flats at the mouth of Charles River, on a construction partly of arches of masonry built on piles, and partly of trestle work, it proceeds up the south side of the valley of this river to Newton, a distance of 8 miles. Two miles farther, the line crosses the river on a bridge of a single span of 120 feet. It is built on Long's patent. The abutments are of hammer-dressed dry masonry, in height above river 35 feet, and cost $6000. One mile farther, it enters Needham by a short heavy cut of 60 feet, immediately succeeding an embankment 600 feet long, and 30 feet high. Soon after it passes through a cut 31 feet high, and 500 long, excavated through a hard granite formation. The line then enters a pond half a mile long, and originally 7 feet above grade, the drainage of which passes down along the road, which is here constructed on piling, 35 feet deep. Thence, crossing the Worcester Turnpike, it follows parallel to the line of the Central Turnpike, to the south end of Morse's Pond, which it passes on an embankment 47 feet high and 700 feet long. Here it enters Natick by a rock cutting of 20 feet, forming a summit, whence it descends at the rate of 30 feet per mile to the south end of Natick Pond, which it doubles by a strong curve. Thence the line passes by easy grades and light work to the valley of Concord River, the bend of which is crossed at Shepherd's Mills by two bridges, of the same kind of masonry as previously described; one of two semicircular arches of 22 feet span and 18 feet rise, the other of 17 feet span and 4 feet rise. Ascending the valley of Concord River to its rise in Westboro' Swamp, (3 miles long,) it passes the town of Westboro' and a dividing ridge, and enters the valley of Elizabeth River. Ascending again, to its head, it passes a summit at Cutler's Peak into the valley of Long Pond, which it passes on a high embankment one-fourth of a mile long, over soundings averaging 20 feet in depth. Thence, rising 30 feet a mile, over a rough country, it passes through the main dividing ridge, 500 feet above tide, by a cut 37 feet deep and 1500 feet long, of hard slate rock, into the valley of the Blackstone River, crossing which it immediately after enters Worcester. The Clarence pattern of rail has been adopted for the whole line. The chairs are fastened immediately to the sleepers (chesnut and swamp cedar,) laid transversely in pits of well rammed rubble. The whole cost of superstructure is about $6000 per mile of single track. The grading for a greater part of the line is finished; that for the remainder, and the laying of the rails, is rapidly progressing, so as to leave but little doubt but what it will be opened through its entire length by the spring of 1835. Eight miles of the road has been opened since April, upon which a locomotive has daily carried an average number of 230 passengers. The whole road is going on successfully, and nothing as yet has occurred to lessen the belief that it will be finished at the time and for the sum contemplated in the original estimate of the engineer, upon whom the work is calculated to reflect the highest credit. The table of ascents and descents is as follows:

16 1-4	miles are level	
2 5-8	"	rise 13 feet
5	"	" 21 "
3.4	"	" 27 "
13 5-8	"	" 30 "

43 1-4 miles total distance.

Boston and Lowell Railroad, Massachusetts.—This road was incorporated June 5th, 1830; construction commenced November 28, 1831; length of road, 25 1-2 miles; width of way, 26 feet in cutting, and 24 feet on embankment. The road is to be formed for two tracks, but only one will be laid through at present. About 8 miles of one track, and 2 or 3 miles of the other track, are laid. The excavations and embankments are principally done, and also the bridges and culverts. The trench walls are nearly completed. There will be 69 river and road bridges, 18 under and 51 over the railroad, beside 12 streets and passage ways to be crossed on a level. The iron rails to be used are of the Liverpool and Manchester, or fish-belly pattern, in lengths of 12, 15, and 18 feet, weighing, with the cast iron chair, about 55 lbs. per lineal yard, chairs 17 lbs. The rails are to be supported every 3 feet on chairs, bolted to stone blocks and stone sleepers, which rest on continuous trench walls, the bottoms of which are 2 1-2 feet thick, and from 30 to 36 inches below the surface of the road-way. The space in the clear, between the rails of a track, is 4 feet 8 1-2 inches, and the top of the rails will be 10 1-2 inches above the surface of the road. The space between the tracks is 6 feet. The stone blocks are generally of granite, and contain 3 1-2 to 4 cubic feet. The stone sleepers which lay across the track are 7 feet long, and vary from 6 by 12 to 10 by 12 inches square. The line of the road crosses Charles river, by a wooden bridge 1,600 feet long. The inclination of the road will not exceed the rate of 1 in 528, or 10 feet to the mile, except a short portion in Lowell. The curves are intended to be of 3,000 feet radii, and upwards, except about 500 feet across the canal in Lowell, where the radius of curvature will be 1,200 feet. There will be about 29 portions of curved line, and 30 portions of straight line. The longest straight line will be short of 3 miles. All the level portions will not exceed 1 1-2 miles. The railroad at the depot in Boston will be about 7 feet above base, or ordinary high water mark. The greatest elevation is in Billerica, 4 miles from Lowell, and is 118 feet above base, and the terminus in Lowell 87 feet, or 80 feet above the depot in Boston. This railroad will open a communication between Boston and the manufacturing town of Lowell, situated on the right band of Merrimack river, 30 miles above its mouth at Newburyport.

From Lowell the river is made navigable 50 miles, to Concord, N. H., by means of locks and short canals built thereon; and, by the Middlesex canal, which enters the Merrimack 2 miles above Lowell, a water communication of 30 miles is open from Lowell to Boston. Very little agricultural produce is brought by this communication down to Lowell or Boston, but large supplies of wood and lumber are obtained. All the kinds of foreign productions generally consumed in the country, with much grain and flour from the middle states, are carried up by the canal and river, and distributed at the various landings. The manufacturing establishments at Lowell, on the Merrimack, and its tributary streams, have been the cause of the principal traffic carried on upon their waters. It is now 40 years since these works for inland navigation were commenced, and their value has been much improved by the increase of manufactories in their vicinity.

This railroad is the offspring of the same spirit of improvement which has built up Lowell, and it is owned chiefly by the same persons, who have invested large sums to carry on the works there.

The large amount of cotton, wool, iron, coal, oil, dye stuffs, manufactured articles, &c., &c., to be transported by the various manufacturing companies at Lowell, with the passengers, will be to the railroad the main source of its income, until other railroads shall be extended farther into the country.

Boston and Providence Railroad.—This company was incorporated in 1831; the work was commenced in Dec., 1832; two-thirds of the grading is now, June 20, 1834, accomplished; 11 1-2 miles of railway are now in use. The road bed is graded for a double track, being in no place less than 26 feet wide, and in the deep cuts 30 and 40 feet. The length of the road is about 41 miles. The capital of the company is $1,000,000, and the estimated cost is within the capital. This railroad will undoubtedly be a portion of the "great route" for communication between New-York and Boston. It is the straightest route, (taking into view its length,) in the world. The curves are mostly of 6,000 feet radius; there is one continuous straight line of 16 1-2 miles. The rail is of the heaviest, weighing 55 lbs. to the yard; is laid on cedar sleepers. The road passes through the townships of Roxbury, Dedham, Canton, Mansfield, East Attleboro' and Seekonk, traversing a most beautiful country. Locomotive engines are used. The passenger cars of the best kind, made in New-Jersey, by the Messrs. Greene.

In Canton, over the Stone Factory Pond, there is a splendid structure, 450 feet in length, and from 40 to 50 feet above the natural surface, built entirely of granite, in the most permanent manner. It is called the "Canton Viaduct," and is one of the finest structures of the kind in the United States. There are 15,000 perches of solid masonry in this structure. It is being built by Messrs. Dodd and Baldwin, of Pennsylvania. The entire road is being built in the most permanent manner.

Stonington and Providence Railroad.—This road is to commence at Stonington Cove, on Long Island Sound, to which place there is an almost entire uninterrupted steamboat navigation from New-York during the year, and extend to Providence, R. I., 48 1-2 miles, where it will probably connect with the Boston and Providence Road, and thereby make an uninterrupted communication between Boston and New-York during the whole year. The elevation to be overcome does not exceed 302 feet, and may be so distributed as to be adapted to locomotive engines. The following shows the character of the route: 14.75 miles level, and under 2 feet; 7 miles under 8 feet; 13.66 under 13 feet; 3,81 under 20 feet; 7.19 under 26 feet; 1.36 under 34 feet to the mile, which gives an average of about 12 feet per mile. The work is to be graded for a double track, but for the present a single track only is to be laid down, with occasional turn-outs, and an edge rail of sufficient strength to require supports every 4 feet. The grading of the route for a double track is estimated to cost $505,830.90; the superstructure, $480,000; land and fencing, $50,000; moving power, cars, agencies, &c. &c., to complete $103,583.09. Total, $1,139,413.99. Operations commenced on this road in 1833, and the work is progressing.

Lowell and Brattleboro' Railroad, Vt.—This road is not yet chartered.

Boston and Salem Railroad.—Contemplated; not commenced.

Boston and Taunton Railroad.—Will probably be connected with the Boston and Providence road at some convenient place.

Worcester and Norwich Railroad.—A charter was granted for this road in 1832. A survey was made, by which it was ascertained to be a very favorable route. The distance from Worcester to Norwich is 60 miles. The country fertile and densely populated. The legislature of Connecticut granted a highly favorable charter, connecting with it a bank, which is required to subscribe for a part of the stock. Nothing has been done, as we are aware of, towards making the road.

Tonewanda Railroad.—Commences at Rochester, and is designed to pass through Batavia to Attica and Buffalo. Incorporated in 1832. Capital, $1,000,000.

Ithaca and Owego Railroad.—This was one of the earliest chartered railroads in the state, with a capital of $300 000; is 29 miles in length, and has two inclined planes ascending from Ithaca. The first is 1,733 1-2 feet in length, and rises 1 foot in 4.28, or 405 feet; the other is 1,733 1-3 feet long, and ascends 1 in 21 feet. The whole elevation above the Lake overcome is 602 feet, within 8 miles; after which there is a descent of 376 feet to Owego. Stationary power is used on the first, and horse power on the other plane, as well as upon the other part of the road. The curves are upon a large (say from 7,000 to 100,000 feet) radius. The road is constructed in a substantial manner much of the way. Trenches are made lengthwise, about one foot deep, filled with gravel rammed, upon which longitudinal sills, 4 by 12 inches, are placed; then cross ties are placed 3 feet apart, with chairs to receive the rail, upon which the iron plates, 2 1-4 by 5-8 inch are laid. The width of the track is 56 1-2 inches. It is in successful operation, and will add greatly to the prosperity of the two flourishing towns at its extremities.

Catskill and Canajoharie Railroad.—This road was intended to divert a part of the business of the Erie Canal to Catskill. The stock was subscribed, but nothing has been done on the road.

Port Kent and Keesville, or the Ausable Railroad.—This road will be 4 1-2 miles in length. The ascent of 40 feet to the mile.

Danville and Rochester Railroad, N. Y.—Was chartered in 1832, with a capital of $500,000. The road has been surveyed and the stock taken. When completed, it will add much to the business of Rochester, and afford great facilities to the country through which it passes.

Saratoga and Schenectady Railroad.—This road was commenced the 1st of September, 1831, and was opened for travelling 12th July, 1832, except a short distance at Ballston, which was completed in April, 1833. Its length is 21 1-2 miles. Its cost, $297,201.22, exclusive of the land it occupies, and some trifling agencies and travelling apparatus, but including every thing, when in complete operation, $297,237. About 3 miles of it is put down on stone foundation. Trenches were dug 2 1-2 by 2 1-2 feet, and filled with broken stone, closely rammed; and upon this square blocks of about 2 cubic feet were

placed, 3 feet from centre to centre. On these stone blocks, cast iron chairs are placed to receive the wooden rails, upon which is the iron plate. Cross-ties of timber secure the rails from spreading. The remainder of the road is laid upon longitudinal sills, upon which the sleepers rest, notched on both sides, to secure the sills in their place, and also to receive the wood rail, upon which rests the iron plate, as in the first part of the road. It has but a single track, with turn-outs. The road is mostly level, and in no case does the inclination exceed 16 feet to the mile. Steam power is used to great advantage, and the net income of the road from April 1, 1833, to February, 1834, was within a fraction of 10 per cent. upon its capital. It will be much more profitable, when the Saratoga and Fort Edward road shall be completed.

Saratoga and Fort Edward Railroad.—This road is designed to be a continuation of the Saratoga and Schenectady road. It was chartered in 1832, and has been surveyed, but not yet commenced, that I am aware of.

Salina, Watertown, and Ogdensburgh Railroad.—At present only contemplated. It will, however, be hereafter made, and continued on south, through Homer, to Binghamton.

Madison County Railroad.—Commences at Chittenango, on or near the Erie canal, and terminates at Cazenovia. It is also in contemplation to extend this road through De Ruyter to Binghamton, there to connect with the great New-York and Erie road, and also with the Lackawana and Binghamton railroad to the coal region of Pennsylvania, by which the salt works at Salina will be supplied with anthracite coal.

Rochester Railroad.—This road extends from Rochester to the head of ship navigation, on the Genesee river, about 3 miles in which it has a descent of 254 3-4 feet, 156 1-2 of which is within 1,000 feet of its termination. It cost a fraction less than ten thousand dollars per mile; was completed and in use the 1st January, 1833.

Buffalo and Geneva Railroad.—Some movements have been made towards obtaining a charter for a railroad between these two points. A railroad will eventually be made over this ground, to connect with a railroad between Geneva and Ithaca, and thence by the Ithaca and Owego, and the New-York and Erie railroad, to this city.

Buffalo and Erie Railroad.—To extend from Buffalo, along the Lake, to Aurora.

Buffalo and Black Rock Railroad.—This road is 3 miles in length, constructed with sills hewed on one side, and covered with plank, laid tranversely, extending quite across the road, thereby forming a horse path and a covering; upon the plank is laid a white oak scantling, 2 by 4 inches, parallel with and directly over the sills; upon this scantling is laid the iron rail, 2 inches by 1-2 inch. The cost of this road is less than $2,500 per mile.

Utica and Schenectady Railroad.—This road was chartered in 1833, with a capital of $3,000,000. Over $14,000,000 were subscribed. It has been surveyed and located. The contracts will soon be let, when operations will commence The route is a very level one, and well calculated for locomotive power. Its length will be about 100 miles.

Rensselaer and Saratoga Railroad.—This road commences and crosses the Hudson at Troy, and passes up on the west side of the river to Waterford; thence to Ballston Springs. The grading is partly completed.

New-York and Albany Railroad.—This road has not yet been, and probably will not be commenced, at present. It was incorporated in 1832. It is to pass up on the east side of the Hudson River, to Albany; its capital $3,000,000. The facilities for river navigation are so great, that this road, for a time, at least, would not be a profitable investment.

Harlaem Railroad.—This road was chartered in the winter of 1831, with a capital of $500,000. The work was commenced in the spring of 1832. The grade was required to correspond with the regulation of the streets, which has required much deep cutting and some high embankment. About 4 miles of the road are now in use, upon which pleasure cars constantly run for the accommodation of those who desire to get out of the city for a short time. When completed, there will be a tunnel of some length through a rock, at Yorkville, after which there will be a gradual descent to Harlaem river. The work thus far has been very expensive, and will cost, when completed, at least its whole capital, and probably more. At present horse power is used. A locomotive engine was provided and used for a short time, but from carelessness, or some other cause, the boiler burst, and the engine was laid aside.

Brooklyn, Jamaica, and Long Island Railroad.—The road to Jamaica has been located, and may be made within a year or two; but that part beyond Brooklyn to Sag Harbor, designed as a substitute for steamboat navigation on the Sound, with the exception of about 25 miles from Sag Harbor to Stonington, probably not immediately—although it will eventually be made. There are so many other roads to be made where there are not as great facilities for business as on, or about Long Island, that this road will not be made for some years.

Paterson Railroad.—This road will extend, when completed, from Jersey City to Paterson, passing, in its route, Bergen ridge, through which there is a deep cutting of near fifty feet, and much of it through solid rock, two extensive marshes and two navigable rivers. It passes the rivers upon bridges; that over the Hackensack is 1700 feet in length, and upon Col. Long's plan, so constructed as to permit vessels to pass; one by a slide and the other by draw. It is constructed in a substantial manner, with cedar sleepers and pine rails, upon which is placed the flat wrought rail, 2 1-2 by 1-2 inch. The first division, from Paterson, 4 miles, to Aquackanonk was ready for use in the spring of 1832. The second division, to the Newark turnpike, west side of Bergen hill, 1st December, 1833, since when cars have run regularly to that point, from whence the passengers are taken to Jersey city in stages. The fare from New-York to Paterson, 16 miles, including ferriage, is 50 cents, and the route is performed with horse power in two hours. There is much heavy work on the route, especially in deep cuttings and embankments. The deep cutting at Bergen hill is not yet completed, and probably will not be this year, but to facilitate business, and to accommodate the Newark Railroad, which is to be in use this fall, a single and temporary track is laid down over Bergen ridge, and will probably soon be in use to theHudson river.

New-Jersey Railroad.—This road is to extend from Jersey city, opposite Courtland st. New-York, through Newark and Elizabethtown to New Brunswick. The first 2 1-2 miles from Jersey city, to the west side of Bergen ridge, will be used in common with the Paterson road. This road is now nearly ready for use, and will probably be completed to Elizabethtown this year. It is to be constructed in a permanent manner, and will eventually be a part of the great North and South, or Atlantic Railroad.

Camden and Amboy Railroad.—Extends from South Amboy to Camden, directly opposite Philadelphia. Its course is uncommonly direct. Its curves are few, and generally of a radius exceeding 1,800 feet. On the 1st division, from Camden to Bordentown, 34 1-2 miles, not yet completed, the route is remarkably favorable, mostly level, and seldom has an inclination of 20 feet per mile. The second division, from Bordentown to Amboy, 26 1-2 miles, now in use, is more rugged, having an ascent from Amboy of 45 feet per mile for a short distance. The rails are of rolled iron, 16 feet long, 2 1-8 wide on top, 3 1-4 at bottom, and 3 1-2 inches deep. The neck a half inch thick; weight, 39 3 16 lbs. per yard. They are secured by clamps of iron, and rivetted at the end of each bar. The rails are secured to the stone blocks and sleepers, by means of nails or pins at the sides, driven into wooden plugs. In order to prevent abrasion and concussion, thin slips of wood are put between the rail and the blocks. The *tracks* are 56 1-2 inches wide. Total estimated cost of the road, with a double track, $1,120,322.14, beside real estate, $115,792.84. $180,000 for steamboats, $41,587.65 for locomotives and cars, and $8,674,01 for wharves and piers. This company have obtained the exclusive privilege across the state. A branch is authorised to New-Brunswick. Steam power is used, and the distance from New-York to Philadelphia is now performed daily in about seven hours.

Delaware and Susquehannah Railroad.—This road is designed to extend from Elizabethtown, N. J., by the way of Somerville to Belvidere, thence through the Lackawana coal region to Pittston, on the Susquehannah. It has been chartered both in New Jersey and Pennsylvania, and the route has been surveyed, but the work has not been commenced.

Philadelphia and Trenton Railroad.—This road extends from Philadelphia to Trenton, N. J., along the Delaware, and but for the charter of the Camden and Amboy railroad, which secures the exclusive privilege of a railroad across the state, it would be continued to New-Brunswick, there to unite with the New-Jersey railroad to New-York, and thus form a continuous railroad between the two cities. Distance, 27 1-2 miles, which will be completed in a few weeks, when there will be, with the exception of the 25 miles from New-Brunswick to Trenton, N. J., a railroad completed or under contract, from New-York to Washington city, and to Winchester, Virginia.

Lackawana, Pa.., and Binghamton N. Y., Railroad.—Contemplated to connect the Delaware and Susquehannah Railroad, with the New-York and Erie, and with the Salina and Binghamton Railroad, and the Chenango Canal at Binghamton, thereby opening the coal region of Pennsylvania to the interior of New-York.

Pittston, Pa., and Chemung, N. Y., Railroad.—Also contemplated to open a communication with the interior of New-York by the Chemung Canal.

Williamsport, Pa., and Elmira, N. Y., Railroad.—A third route from the interior of Pa. to the interior of New-York. This road was chartered in 1832. The route has been surveyed, but I am not informed what progress, if any, has been made with the work.

Philadelphia, Germantown, and Norristown Railroad.—The act of incorporation of this company was granted by the Legislature of the state of Pennsylvania in the winter of 1830–31; and the preliminary surveys for the final location of the line commenced early in the spring, and the work was put under contract, and commenced in July of the same year. The line as now constructed to Germantown leaves the corner of Ninth and Spring Garden streets in Philadelphia, and soon after enters the valley of Cohocsing, which stream it crosses by a handsome viaduct of mortared rubble, in one arch of 20 feet span, and a total height of structure of 25 feet. Curving there to the left, it passes up the valley of the Cohocsing, crossing the Germantown road by a skewed viaduct, on Town's plan, of 73 ft. span, on abutments of cut stone mortared masonry. Thence through a summit it joins the valley of Fisher's Run, up which it ascends, crossing Fisher's Lane by an arch of 33 ft. span, and 24 ft. high, of rubble masonry, and immediately after reaches Welley's Factory, where it ceases. The original location was based upon the necessity of passing through Germantown, thereby rendering the construction of the line liable to extremely heavy excavations and embankments, and a bridge over the Wissahiccon more than 100 feet high. This line, by a special act of the Legislature, the company has been enabled to abandon entirely, and are constructing the road anew, branching off at Weise's Tavern, and immediately after gaining the valley of the Schuylkill, up which it will proceed by easy grades and light work to Norristown. The grades on the part now constructed vary from a level up to 32 feet per mile, the alignement of which consists of numerous curves, on radii of from 700 to 3,500 feet. The superstructure consists of a Clarence rail and chair, fastened by means of a screw and nut to stone blocks. The graded surface is 25 feet, on which a double track has been laid for the whole distance to Germantown. The highest embankment is 18 feet, and the deepest excavation is 17 feet, and yet the road has already cost the enormous sum of $250,000! or a little more than $41,000 per mile.

The West Chester Railroad.—Is a branch from the Philadelphia railroad to the flourishing village of West Chester. It unites with the Pennsylvania railroad on the South Valley Hill, two miles west of Paoli. It is the property of a company composed of enterprizing citizens of Philadelphia and West Chester. Length, nine miles; cost about $100,000. Completed, and now in use.

Little Schuylkill Railroad.—From Port Clinton, at the mouth of Little Schuylkill, to the village of Tamaqua, on that stream—distance 21 1-2 miles, with several branches to coal mines. This is the work of a company, and is designed principally to transport coal to the Schuylkill navigation. Finished, and in use.

Mine Hill and Schuylkill Haven.—At the mouth of the West Branch of Schuylkill, up that stream 10 1-2 miles, to Mine Hill Gap. Finished and in use. Trade, coal. Belongs to a company.

Mount Carbon Railroad.—From Mount Carbon, one mile below Pottsville, up the valley of the Norwegian creek; main line and branches, about seven miles. Finished and in use. Trade, coal. Belongs to a company.

Danville and Pottsville Railroad.—From Pottsville to Sunbury, opposite the forks of the Susquehan-

nah. Length, 45 miles; eight miles nearly completed. It is designed to accommodate the great coal region on the Shamokin, Mahoney, &c., and to connect the Susquehannah with the Schuylkill canal. Belongs to a company.

Schuylkill Valley Railroad.—From Port Carbon, at the head of Schuylkill navigation, up that river to the town of Tuscarora—distance 10 miles. Trade, coal. Belongs to a company. Finished, and in use.

The Mauch Chunk Railroad.—The first of any magnitude completed in the United States. From the head of the Lehigh Canal, at Mauch Chunk, to the coal mine on the summit of Mauch Chunk mountain. Aggregate of main line and branches, 12 3-4 miles. Belongs to the Lehigh Coal and Navigation Company.

The Roan Run Railroad.—From Mauch Chunk, up the Lehigh, to a coal mine—length, 5 1-4 miles. Finished, and in use. Belongs to the above company.

Lyken's Valley Railroad.—From Millersburgh on the Susquehannah, up Lyken's Valley, to a Coal Basin in the Brody Mountain. Distance, 16 1-2 miles. Began, and completed in 1833.

Carbondale Railroad.—Belongs to the Hudson and Delaware Canal Company, and connects that work with the Coal Mines in the valley of the Lackawana. Length of road, 16 1-4 miles. Finished and in use.

Alleghany Portage Railroad.—This road connects two canals, one of 171, and the other of 104 1-4. Its length is 37 miles, in which it overcomes an elevation, by inclined planes, of 1,399 feet. There are ten inclined planes, varying in length from 1,500 feet to 3,100 feet, and, in inclination, from 4 degrees, 8 min., 48 seconds, to 5 degrees, 51 min., and 9 seconds, from a horizontal plane. The ascent on the east side is 1,399, and the descent on the west 1,172 feet. The summit is a tunnel of 900 feet in length. The entrances are both arched with cut stone. There are 4 viaducts on this road, varying from 40 to 80 feet span, and 68 culverts, with span varying from 3 to 25 feet. These works are all of the very best masonry. There are also 85 drains, or square culverts, built of stone, making 157 passages for water under the road. The viaduct over the Juniata, at Holidaysburg, is of cut stone; has two oblique arches, with spans measured on the face 40 feet 3 1-2 inches, or of 33 feet at right angles. The viaduct over the Little Conemaugh has an arch with a span of 80 feet, and is 78 1-2 feet high from foundation to top of parapet wall. On the inclined planes the superstructure is of wood rails, with flat iron bars, but the other parts of the road have the wrought iron English edge rails, which cost, delivered on the spot, $70 per ton. The rails are laid upon stone blocks, with cast iron chairs, except on high embankments, where wood sills and cross ties are used. The road, when completed, with the necessary machinery for use, cost $1,49-5,739.50. (See Railroad Journal, Vol. I., page 645, and Vol. II., pp. 66 and 564.)

Philadelphia and Baltimore Railroad.—This road will form a connecting link between the Pennsylvania and Maryland railroads. It diverges from the Pennsylvania, or Columbia Railroad, 45 1-2 miles from Philadelphia, passes through Oxford, and will strike the Susquehannah about half a mile above Port Deposit. Its length will be 20 1-4 miles, within the state of Pennsylvania, and 11 miles in Maryland, without even a bridge or a culvert. The ground is highly favorable for a railroad, which, with a double track of wood superstructure and flat rails, is estimated to cost $12,030 per mile. The grade of the road is favorable, having only in one place an inclination over 30 feet per mile, where it is 44 feet per mile. The curves are one radii of 1000 feet and over.

The above list is believed to comprise all the important railroads in Pennsylvania, actually finished, or upon which arrangements have been made for their early completion. Some smaller or branch lines have been probably overlooked.

Newcastle and Frenchtown Railroad, Delaware.—This road is considered by many as one of the best in the country. It was commenced at an early day, and was in use nearly through its entire line on the 1st of April, 1832, yet we have never received any particular report, or information, as to its cost, &c., &c. Its length is 16 miles, from Newcastle, on the Delaware, to Frenchtown, on the Chesapeake. It is said to be constructed in a superior manner. Locomotive power is used, for which its grade and curves are highly favorable.

Baltimore and Ohio Railroad.—This road was chartered in 1827, with a capital of $6,000,000. The grand object of this road was to open a direct and easy communication from Baltimore to the always navigable waters of the Ohio, at Wheeling, or some other suitable place. The work was commenced July 4, 1828, yet very little was done until October of that year. The first division of the road has been constructed, on account of the unfavorable topography of the country, at great expense. There are some very heavy excavations and embankments, and expensive viaducts. The graduation alone of the first 13 miles, cost over $381,000, or over $29,000 per mile, and the masonry on the same section cost $17,160 64 per mile. This road was arrested in its progress for a length of time, by coming in contact with the Chesapeake and Ohio Canal. A settlement was made, however, and it is again progressing towards Harper's Ferry. It has been in successful operation from the Point of Rocks for more than a year. The enterprise of this company has done much toward disseminating a spirit for improvement in other states. It has been visited by those interested in similar works, from all sections of the country, who have returned and carried with them information which enables them to diffuse amongst their neighbors a spirit which will produce, eventually, the most beneficial results. It is much to be desired that this work should be continued on to its intended termination, the Ohio River. (See Railroad Journal, vol. i. p. 657.)

Baltimore and Washington Railroad.—This road is to connect with the Baltimore and Ohio railroad, 8 miles from Baltimore, and is, in fact, an appendage to the Baltimore and Ohio road. It will be about 32 miles in length, exclusive of the Baltimore and Ohio, and is estimated to cost about $1,500,000. The distance from Baltimore to Washington is 40 miles, which it is contemplated to run with locomotives in two hours.

Atlantic and Ohio, or James and Kanawha Railroad.—A work second to no other in the South, and yet scarcely agitated at the present time. The contemplated railroad from York, or Elizabeth river, on the Chesapeake Bay, up James river to the valley, and up the valley to New River, and thence down that and the Kanawha, or in its vicinity, to the Ohio river, must eventually be constructed; and, when *properly* constructed, Virginia may again look for commerce within her limits. Such a work *will be* constructed, and it only remains for the present generation to decide whether they will enjoy its benefits or leave them for the next.

Petersburg and Roanoke Railroad.—This road was chartered in 1830, with a capital of $400,000. It commences at Petersburg, and terminates 1 1-2 miles below the falls of the Roanoke, and is 59 miles in length, a distance of 3 1-8 miles only greater than a straight line. Its curves are mostly on radii of 2 to 9 miles, and after leaving Petersburg it has in no place a greater inclination than 30 feet per mile. It is said to be one of the best built and best managed railroads in the country. The graduation of the road and masonry of the bridges, culverts, and other constructions, are of the most permanent kind. The superstructure is of white oak sills, 12 inches in diameter, heart yellow pine rails, 5 by 9 inches, plated with iron, 1-2 inch by 2 inches wide. One-half of the road was opened for use in October, 1832. The remaining part, or to within a few hundred feet of the Roanoke, was completed and used in August, 1833. Locomotive engines are used to great advantage on this road.

Portsmouth and Roanoke Railroad, Virginia. Commences at the town of Portsmouth, opposite Norfolk, and passes through Suffolk, over a very level country 77 miles, being only half a mile farther than a direct line. It crosses the Petersburg Railroad, and terminates at the north bank of the Roanoke river, opposite Weldon, in North Carolina. The greatest inclination is only 20 feet per mile, and 5730 feet is the smallest radius. This road is estimated to cost $475,000. The surveys have been completed, and the work commenced between Portsmouth and Suffolk. This road, when completed, will compete with the Petersburgh and Roanoke Railroad.

Winchester and Potomac Railroad.—This road was chartered in 1831, or '32. It was put under contract in November, 1833, with fair prospects of early completion. It will connect with the Baltimore and Ohio Railroad at Harper's Ferry, and at no distant day be continued south through the Valley of Virginia, and probably either continued on to Knoxville, in Tennessee, or follow New and Kenawha rivers to the Ohio. It is *impossible* to arrest the spirit of internal improvement, especially in a section of country that has so many natural advantages as Virginia. Her wealth in minerals, water power, and resources for enriching her soil, are not duly appreciated by her citizens. They are, however, becoming so, as will ere long be seen.

Richmond, Fredericksburg, and Potomac Creek Railroad.—The citizens of Richmond and Fredericksburg have made some considerable effort to make a railroad from the Potomac to Richmond. The distance is about 70 miles; the country level; the present roads, especially in the wet season, as bad as need be. Present appearances are favorable to the progress of the work, as a party of engineers are at this time (July, 1834,) engaged upon it. Should it be made, and also continued to Petersburg, Virginia will have done her share towards completing the great line through the Atlantic States, as connected with steamboat navigation.

Pulaski, Tennessee, and Florence, Alabama, Railroad.—The route for this road has been surveyed, the stock taken, and the directors elected. It is to be commenced this fall at both ends, and will be, when completed, 59 1-2 miles in length.

Elkton, Tennessee, Athens and Decatur, Alabama, Railroad.—A railroad is contemplated from Elkton, Tennessee, through Athens, to intersect the Tuscumbia, Courtland, and Decatur Railroad, probably at Decatur.

Tuscumbia, Courtland, and Decatur, Alabama, Railroad.—This railroad, the first undertaken in the far South, (except perhaps the Pontchartrain and New-Orleans Railroad,) was commenced in 1831, and more than 15 miles of it are now in operation; it will be about 30 miles in length when completed, and will probably be ready for use by the 1st of October, 1834. It has wood rails, resting on cedar sleepers, upon which is placed a flat wrought iron rail. Its greatest ascent is 28 feet per mile, and it has but one curve, with a less radius than 1,512 feet, which is 1,380 feet. This road is designed as a link in the great chain of railroad from the Mississippi, to and through the Atlantic States, and it will be intersected by numerous other roads, both from Alabama and Tennessee. It is estimated to cost about 10,000 dollars per mile when completed.

Tuscaloosa and Decatur Railroad.—A railroad is contemplated between Tuscaloosa and Decatur.

Montgomery Railroad.—Some movements have been made for constructing a railroad from Montgomery, Alabama, to some point on the Tennessee river, probably at Decatur.

Quincy Railroad.—A charter was granted for this road in the winter of 1825-6. The object of this road was to communicate with the granite quarries, on the Neponset, about 3 miles from tide water. It was at first laid down with wood, which has been replaced with granite sills. The rail used is the flat bar of iron, 3-8 of an inch by 3 inches, secured to the sills by 3-8 inch iron bolt, 3 inches in length, the head of which fits into a countersink. It is said to be done in the most substantial manner. The sills are laid on ruble stone, placed in a trench 2 1-2 to 3 feet in depth, closely rammed, with a cross piece of granite, 7 feet in length, every 6 feet. Each car carries from 6 to 7 tons; its own weight being about 3 tons. This road has a descent of 27 feet to the mile, in addition to an inclined plane, which descends 84 in the distance of 380 feet. Chains are used instead of ropes for lowering the cars. The empty, or returning cars, tare moved up the inclined plane by the descent of the loaded ones. The cars are moved to the landing by horses, at the rate of 3 1-2 or 4 miles per hour, each team of 3 horses taking seven loads, of 4 cars each, or 150 to 160 tons per day. It is found that the labor of transportation is much easier on the granite than it was on the wood sills.

Boston and Ogdensburgh Railroad.—Chartered by the different states, and formerly much talked of. Should it ever be carried into operation, it will probably connect at Lowell, with the Boston and Lowell road, passing through Concord, N. H., cross the Connecticut, at the mouth of *White* river, at Hartford, Vt.; thence to Montpelier and Burlington, from whence to Plattsburg steambotas would be used during the summer. The result of this work, should it be completed, will be to divert much of the Canada trade to Boston, which will be of immense advantage to that city.

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ERRATA.

In the description of the Ithaca and Owego Railroad, 6th line, for "1,733 1-3 feet long," read "2,225 3-4 feet long." Also, in the same paragraph, 18th line, for "chairs," read "gains."

The cost of the Saratoga and Schenectady railroad, exclusive of the land it occupies, &c., should have been "$217,201 22," instead of "$297,201.22," as printed.

The Art of Brewing—Ox Mill used in the Breweries of Vienna. [From the London Mechanics' Magazine.]

Of the treatises published under the superintendence of the Useful Knowledge Society, one of the very best was that on the "Art of Brewing," by Mr. David Booth; but owing (we believe) to some misunderstanding between the author and the Society, it was left in an incomplete state—two parts only, instead of four, having received the Society's *imprimatur*. Mr. Booth has, under these circumstances, been induced to give Parts III. and IV. to the world through another medium.*

Part IV. is appropriated to brewing in foreign countries, and treats of the art as practised at Munich, Prague, Vienna, Berlin, Brussels, Louvaine, &c. Mr. Booth states, "that for the greater portion of the information in this chapter he is indebted to the manuscript and oral communications of two German brewers (from Vienna and Munich), who have been, and now are, visiting the principal towns of Europe, for the laudable purpose of acquiring information concerning their business."

From this part, being that which contains the most novel information, we shall make a few extracts.

And first, as to the *Bavarian beer*, which, when in prime condition, is "as bright as wine, and contains so much carbonic acid, that it is, in that respect, similar to champagne."

"The beer throughout all Bavaria is nearly of the same strength: usually between 3¼ and 3½ barrels to a quarter of malt. It is made wholly from malted barley and hops; and all sold at an uniform rate, which is fixed by law every year, according to the price of barley; so that there is but one kind of malt liquor for all classes, from the prince to the peasant. The rate for the present year is 16s. per barrel. The beer pays no duty; but the malt must be ground at a public mill, where an impost is levied, amounting to about half of its original value. The malt is screened before carrying it to the mill; and being generally cut with stones, it is also previously damped, in order to prevent the loss by dust. This operation is performed by sprinkling with a watering pan, at the same time frequently turning the heap till it has been well mixed with about two gallons of water to the quarter; and then leaving it to soak for nine or ten hours, that the moisture may penetrate to the centre of each grain. When the malt is to be bruised with rollers, this damping is not considered necessary."—p. 25.

* * * *

"The cellars in Munich are very deep under ground, so that the temperature never rises higher than between 7 and 8° of Reaumur, which is from 48 to 50° of Fahrenheit. In some of them ice is preserved through the summer. It is within such cellars that the beer is cleansed, into casks that lie on heir side, bung uppermost.

* * * *

"After the beer has thus lain from eight to ten months, it is reckoned to be fit for use; and for that end it is drawn off into small casks as wanted, which are immediately carried out to the publican, and on the same day drank by his customers: so that every publican must be supplied with beer every day from the brewery."—pp. 27, 28.

* * * *

"Great care is requisite in having the store-casks very clean and *sweet* before filling them, lest they should communicate a disagreeable flavor to the beer. In two towns this is effected, after they are well washed, by smoking them with burning sulphur; but in the rest of Bavaria it is done by lining them with pitch. The following is the manner by which this is effected at Munich: The store-casks, in which the beer is cleansed, are previously *pitched* every time for summer beer, and once a year for winter beer. Pitching is practised in this way: one end of the cask is taken out, and two English pounds of pitch for every barrel of its contents, if the pitching has only to be renewed (but double that quantity, if for the first time,) is set fire to on the bottom of the cask, and made to burn until the whole has become perfectly fluid. This being done, the fire is extinguished, by putting in the head of the cask and driving the hoops close; and then the cask is rolled about, and turned in every direction, so that the pitch may be spread over every part of the inner surface, which it will thereby cover with a crust of one eighth of an inch thick. This crust is apt to crack and blister, which causes the necessity of re-pitching every season. The professed object of this manipulation is cleanliness; but it doubtless communicates a peculiar flavor to the beer, which, however, is liked, and consequently required, by the customers of those brewers."—p. 29.

* * * *

"The brewers of this city (Augsburg) wash their coolers with great care, scrubbing them every week with Dutch rushes—the stalks of the *equisetum hyemale*; but, notwithstanding this apparent regard to cleanliness, they have one practice which we, in this country, should not venture to imitate. Like the rest of their countrymen, they pitch their store-vats; but instead of waiting until the plaster is cold, they cleanse the fermented worts into the vats while the pitch is smoking and burning hot. It is this which gives the peculiar flavor by which the Augsburg beer is distinguished from that of all the rest of Bavaria."—p. 31.

The beer next in continental repute to the Bavarian is that of Prague.

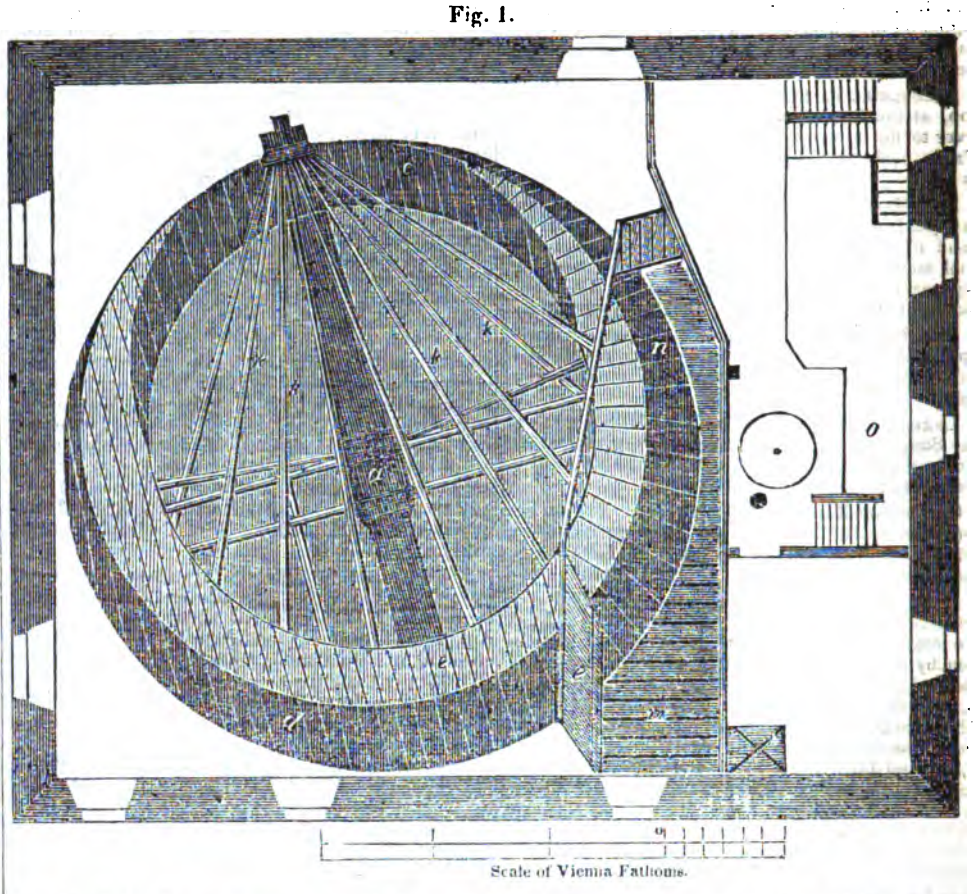
"The city of Prague has been famed for its breweries from time immemorial. These constitute the chief support of a great proportion of its inhabitants; and the beer, next to that of Bavaria, is accounted to be the best in Germany. The mode of brewing is very similar to that which is practised at Munich. The brewers in the city draw one hundred gallons of beer from the quarter of malt, while those of the suburbs make ten to twelve gallons more; and, notwithstanding, the beer of the latter has a more agreeable taste than that of the former."—p. 31.

* * * *

"The beer vaults of Prague, of which every publican has one, are of the very best kind. The floor of each is covered with a deep mass of ice, which never melts, and upon this mass the beer is placed, when received fron the brewer. After it has lain from four to six weeks on its icy bed, it is fit for drinking, and is served out to the customers in that chilly state."—p. 33.

In treating of the method of brewing at Vienna, Mr. Booth gives the following description of a species of tread-mill, by means of which oxen are employed to drive the mill stones and rollers (for bruising the malt), which, though "little, if at all, known in this country," he thinks deserving of more extensive publicity, "believing that it would prove a cheap and convenient power

Fig. 1.



* The Art of Brewing. Parts III. and IV. By David Booth. To which is added an Appendix concerning Burton Ale. London: F. J. Mason. 8vo., 1834, pp. 56.

Fig. 2.

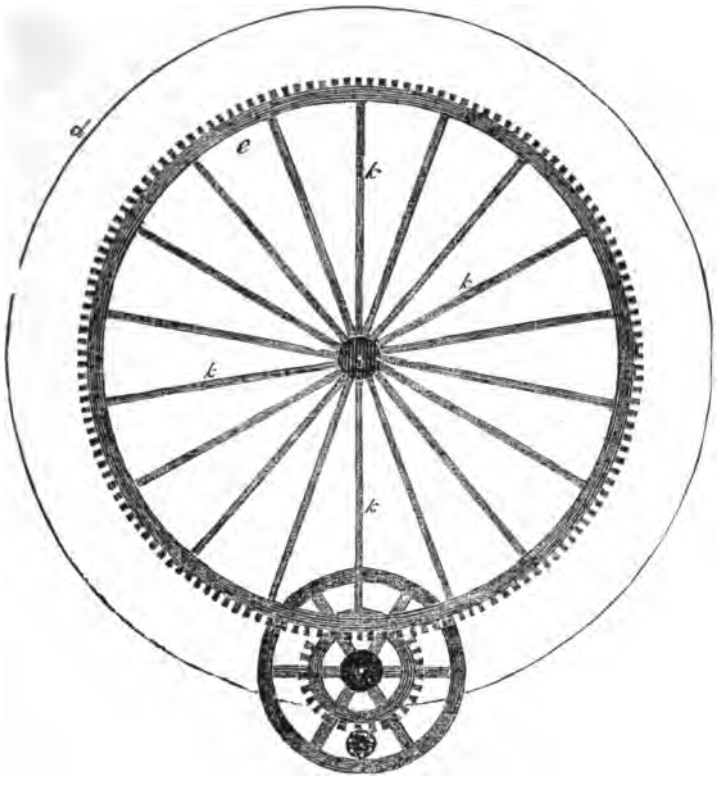
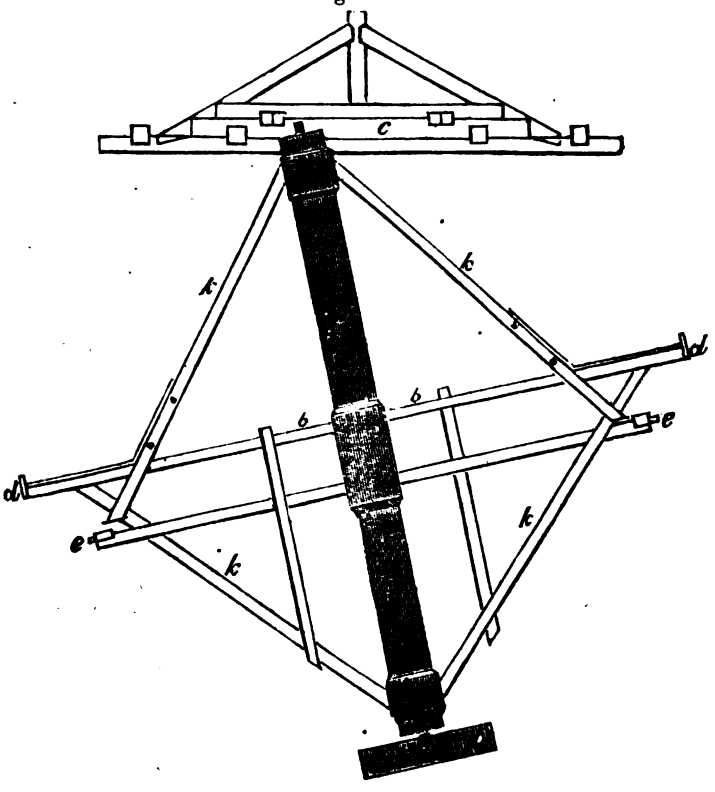


Fig. 3.



in certain situations." We copy also, by permission of Mr. Booth, the engravings to which the description refers:

"Fig. 2 is a section, showing the position of the tread-wheel, *d d*, with respect to its angle of elevation as compared with the horizontal portion of the roof *p p*. The shaft *a*, at right angles, and fixed to the tread wheel, turns on pivots at the top and bottom, which are inserted into strong timber-work. The cog-wheel *c c*, parallel to the tread-wheel *d d*, and also fixed through its centre to the shaft *a*, communicates its motion to such other parts of the machinery as may be required. The wooden spurs *k k k k* sustain the tread-wheel, above and below, uniting a little above the cog-wheel, and fastened at their ends into the shaft. The rim *d d*, being that portion of the circumference of the wheel on which the ox treads, is further supported by the timbers *b b*.

"Fig. 3 is a view of the cog-wheel from above, showing its communication with the other parts of the machinery, such as the fly-wheel *f*, the crank *h*, &c. The spurs *k k*, &c. which preserve it steady in its place, are also seen.

"Fig. 1 is a ground plan of the whole building in which the tread-wheel stands. It is very high, and the main shaft is sunk in an excavation five feet deep in the ground-floor. The same letters of reference which mark the parts of figs. 2 and 3 also apply to this. A bar of boards, *l*, is fixed to prevent the ox from falling down into the pit below, should he accidentally get loose. The wooden gangway, *m*, enables him to get up from the stall below to the stage *n*, on which he walks without moving forward.

"We have abridged the description from the original, and consequently have left some of the letters of reference unnoticed; but we have doubtless said sufficient to be understood. When much power is wanted, the mill is sometimes supplied with three or four oxen together, in a team. The scale affixed to fig. 1 also applies to figs. 2 and 3. It is one of Vienna fathoms, which are something larger than English, 100 of the former making nearly 104 of the latter."—pp. 38–41.

It will doubtless be in the recollection of our readers, that the Burton ale brewers, moved by what was said of their peculiar modes of practice in the second part of this work of Mr. Booth's, applied to the Court of King's Bench for leave to file a criminal information against the publishers of the Useful Knowledge Society; and that, in consequence of Mr. (now Lord Chancellor) Brougham's afterwards stating to the Court, on the part of the Society, that they had, after due inquiry, satisfied themselves that there was no ground for imputing to the plaintiffs the use of any thing, save malt, hops, and water, in the manufacture of their beer, the rule to show cause was discharged. It appears, however, from the extract which follows, that Mr. Booth himself (incredible as it may seem) "was never consulted" with respect to these proceedings; and that had he been consulted, as he ought to have been, the records of the court might possibly have told a very different tale:

"On referring to Chapter X., Part II., of the Art of Brewing, which treats of Burton ale, it will be seen, that, in recommending the adoption of certain ingredients, the writer was careful not to impute the use of them to the licensed brewers; he well knew, that for them every article except malt and hops was illegal, and subjected them to severe penalties. But the question arose, how much was insinuated, and how far such a suspicion might raise a prejudice against their beer—a circumstance directly opposite to the intentions of the author.

"One of the affidavits gratuitously acknowledged the occasional use of flour and salt, to assist the fermentation of the inferior ale; and the jalap, of which it only was said that 'some recommend' for the same purpose (and the use of which is doubted at page 28, Part I.), may as well be left out of the supposed-accusatory list of ingredients. These, then, are reduced to

Salt of steel -	2 oz. to 20 barrels.
Honey - -	1 lb. per barrel.
Sulphate of lime	6 oz. per barrel.
Black resin -	1 oz. per barrel.

"With respect to the proceedings in this prosecution, the writer of the alleged libel, though his character was in some degree at stake, *was never consulted*. It appears, from what followed, that several chemists were employed to analyse the ale, as well as the water of which it was made; and, had he known of their appointment, he would have told those scientific gentlemen, that the honey and resin (granting that they had ever been introduced) *would certainly escape their detection*—that the salt of steel, not being by weight one part in sixty thousand, would possibly be too minute for discovery; and that the sulphate of lime alone would probably be found. The result would have justified the prediction."—pp. 52, 53.

New Method of Harvesting Grain.—We have examined the drawing of a machine to gather grain as it stands in the field without cutting. It is called the Locomotive Thresher; intended to be moved by horse power, and, with the assistance of three men or boys of fifteen years of age, is calculated to go over ten acres of wheat or other grain per day, and gather say two hundred bushels, leaving the straw standing on the ground threshed as clean as is generally done in the ordinary way, thereby saving all the expense of harvesting; and by ploughing in or burning the straw, it is supposed the ground may be tilled *ad infinitum* without diminishing its fertility. Should this invention succeed, it will afford another inducement for farmers to inhabit and cultivate those beautiful prairies which abound in the far west. The ingenious inventor is Mr. John T. Vail, of La Porte, Indiana, formerly of this town.—[Rahway Advertiser.]

Norfolk, July 18.

Arrival of the Boxer—The U. S. Schr. Boxer, Lt. Com. Farragut, from the coast of Brazil, came up from Hampton Roads yesterday morning, anchored off the Naval Hospital, and fired a salute. The Boxer left Rio on the 8th of June, at 7 o'clock, P. M. Arrived at Bahia on the 12th, and remained there 3 days, and sailed for Pernambuco, where she remained one day; left there on the evening of the 22d, and arrived off the light, at 7 A. M. on Wednesday, making a passage of 37 days and 12 hours from Rio, and 23 days from Pernambuco. The Boxer left the U. S. ship Natches, Capt. Zantzinger, at Rio, and the Ontario, Capt Salter, at Monte Viedo—officers and crew all well.

The U. S. schr. Enterprize, Lt. Com. Campbell, bound to the coast of Brazil, went to sea from Hampton Roads yesterday morning.

The Hon. Mahlon Dickerson, Secretary of the Navy, and Commodores Rodgers, Chauncy, and Morris, Commissioners of the Navy Board, arrived here on Saturday in the Baltimore steamboat, on a visit of inspection to this Naval station.—[Herald.]

[*Correspondence of the Journal of Commerce.*]

Washington, 19th July, 1834.

It has been ascertained, at the Treasury Department, that the amount of the appropriations made by Congress, at the late session, is *twenty-two millions* of dollars; exceeding the Treasury Estimate by three millions and a half.

The charge upon the Treasury, for the present year, will, therefore, be as follows, viz:

Appropriations at late session,	$22,000,000
Public Debt, principal,	4,760,082
Interest on	285,000
Former Appropriations unsatisfied at the close of last year,	5,964,572
	$32,909,653
From the last item deduct as an ascertained excess of appropriations,	774,383
	$32,135,270

The Receipts of the Treasury, for the year 1834, may be stated as follows, viz:

Estimated receipts from all sources	$15,500,000
Probable Excess of Receipts over Estimates	1,500,000
In the Treasury on the 1st January, 1834,	7,985,790
Total,	$27,983,790
Deficiency on the 1st of Jan., 1835,	4,201,460

It is true that a portion of the appropriations may always be exposed to remain unexpended at the end of the year, and that the average of such unexpended balances, for the last four years, has been about five millions.

The Treasury will, therefore, be able to meet the demands made upon it, within the year, but will be in debt, at the end of the year, to the amount of the deficiency above stated.

If Congress had remained in session three weeks longer, they would unquestionably have appropriated, for public and private objects, some two or three millions more.

I see no reason why the appropriations should be less next year than they were this, but many why they should be greater. The appropriations for 1833 exceeded by three millions the appropriations of the previous year, and exceeded the Treasury estimates by three and a half millions; but they were less by half a million, than the appropriations of the present year. The Secretary of the Treasury in his Report at the commencement of the late session, remarks upon the heavy appropriations of the previous year, and forewarns Congress that "a similar amount of expenditure, authorized at the present session, might render it necessary to *provide additional revenue* earlier than is now contemplated." Even if Congress adopted at once "a guarded rule of appropriation," he though it would be necessary, in two years from that time, "to impose duties on article that are now free, in order to meet the current expenses of the Government," inasmuch as, under the compromise act, the duties were to undergo a yearly reduction for ten years.

But it is obvious that the temper and constitution of Congress, especially since the augmentation of the number of representatives, are unfavorable to the "proper economy" and the "guarded rules of appropriation" recommended by the Secretary.

You may be assured, therefore, that the first care of Congress, at the next session, will be to add some five or six millions to the revenue, by restoring the duties on Teas and other articles now free of duty.

NEW-YORK AMERICAN.

JULY 20—25, 1834.

LITERARY NOTICES.

Narrative of an Expedition through the Upper Mississippi to the Itasca Lake, the actual source of this river: by Henry R. Schoolcraft. New York: Harpers.

Letter from the Secretary of War, transmitting Lieut. Allen's Report of his visit with H. R. Schoolcraft, to the Northwest Indians, in 1832. Washington: [Pub. Doc. 323.]

Reader, did you ever look upon the Mississippi? Not the turbid big sewer of the Southwest, with its dirty current and swampy shores—the lengthened channel of the muddy Missouri that has been so grievously misnamed!—but the broad and limpid tide, that, swollen with the pure snows of the North, comes rolling from a thousand crystal lakes, through rocky bluffs that lift their battlemented turrets like the towers of by-gone days along its waters, or lead off their grey walls so far into the prairie that miles of meadow intervene between their base and the flower-kissed current. Have you ever stood upon those frowning battlements, and looked down into the clear depths beneath you—there where a hundred green islands, like the floating gardens of Montezuma, seem dropt upon the sunny surface—or glancing from their shadowy copses, have you watched the salient points of the bold bluffs opposite assume a thousand changes as the gorgeous clouds of sunset would drift over the pearly sky above you? If so, you are to be envied for having seen one of the most beautiful rivers of the world, at a season when it wears its loveliest aspect—though, under whatever sky it may be viewed, no one will ever forget his glorious impressions when he first beheld the Upper Mississippi. And this is the stream, so grand and beautiful, whose very tide alone, did it but flow in a contrary direction, would steal one away from the vulgar haunts of men, and lure him on unconsciously into the wilderness, whose sources have been but now explored. The barbarous waters of the Nile and the Niger have had hundreds of victims; and the savage fountains of the Missouri and the Oregon have been long since tasted;—but it is only now, when the commerce of an Empire is floating upon its bosom, that we know where the Father of Rivers takes his rise.

The discovery, we do not hesitate to say, is primarily due to Mr. Secretary Cass, as the institutor of the present expedition; and next to him, the persevering Mr. Schoolcraft, and the accomplished young officer, Lieutenant James Allen, of Ohio, must divide the honor between them. Mr. Schoolcraft was, indeed, the head of the expedition; but, as we shall show hereafter, its difficulties and its dangers were more than equally shared by his military companion; while we apprehend that modesty alone, and not want of ability, has prevented Mr. A. from giving the result of his observations in a form to attract equal attention with the valuable work of Mr. Schoolcraft. Of the two accounts of the expedition, drawn up by these gentlemen, the unpretending and succinct official statement of the young officer, we do not hesitate to say, is the best written of the two; but the more ample and satisfactory publication of Mr. S. embodies a variety of information in relation to the general condition of the country, and the various Indian tribes through which the exploring party passed, that will make it sought with avidity, and will amply repay perusal. Indeed, next to Governor Cass, we can recollect no one to whom the public are more indebted for a laudable research, and industry displayed in illustrating Indian subjects, and unfolding the resources of our northern frontier, than to Mr. Schoolcraft. The former gentleman, (Governor Cass,) however, has been by no means generous in giving the results of his own observations to the public; and we could wish that some would arise, who, to the zeal of the latter, would only add as much literary, as he possesses scientific, qualification. Such we know there are, among the accomplished young officers upon our frontier posts: but—whether from want of ambition, from mistaken modesty, or from lack of leisure, we are unable to determine: they have hitherto contributed so little to the small stock of national literature, that we almost despair of their ever being stirred up to a sense of what they are capable of doing, of what they owe to themselves, to the army, and to the country. There is not a post upon the frontier, but what numbers among its officers men whose talents and cleverness would make them an acquisition to literary circles, however exacting; and it is not to be longer borne, that, with the amplest and freshest materials among them for their exercise, they should still be squandered in obscurity. We take the official report of Lieutenant Allen to the Secretary of War, as a bond for his actual appearance hereafter in the court of literature, and dismiss him for the present.

The expedition of Mr. Schoolcraft, which was nominally undertaken by virtue of an act of Congress to vaccinate the Northwestern Indians within our territories, is the third national attempt that has been made to arrive at the true sources of the Mississippi. Gen. Pike's being the first, and a movement in that direction by Governor Cass, with an exploring party, the second. A ridiculous Italian, of whom a hundred laughable stories are told on the frontier, has in the meantime most absurdly claimed, in a book published abroad, to be the true discoverer of the fountain head. Lac La Biche, or Itasca Lake, as Mr. Schoolcraft more euphoniously calls it, has been long known to the Indian traders, but its position has always been laid down erroneously upon the map; and it is now found that the Mississippi after long running to the north till it reaches a high latitude, and diffuses itself in a hundred swamps and lakes, becomes again a distinct stream, and taking a sudden dip to the South, hides its head at last in a lake of clear water somewhere about the latitude of Fond du Lac, on Lake Superior. The discovery, approach to and examination of this important geographical point, is so interesting, that our readers will not blame us for giving here, the impressions of both the discoverers. The limits within which Mr. Allen was restricted, by the nature of an official report, prevented him of course from expatiating upon the scene; but his rapid glance at its general features must not be lost, and we therefore quote his journal.

We entered the Mississippi from a bay on the west side of Cass lake, and passed, in a short distance, through two small lakes and a savanne, above all which we still found a large river forty or fifty yards broad, and from two to six feet deep, which wound its way through a narrow valley of low, alluvial bottom, confined by pine hills, up to Lac Travers, forty miles above Cass lake. In this distance there are many rapids running over boulders of primitive rock, but there is no fall, and no rock is seen in place.

Lac Travers may well be arranged among the sources of the Mississippi. It is a beautiful lake, about ten miles long from north to south, and about half as broad, surrounded by pine woods, which rise into high hills on the north and northwest, forming a part of the chain dividing the waters of the Mississippi from those of Red river. The western shore is much indented with bays, but the east and southeast is beautifully regular and plain, with a sandy bank, and beach of pure white sand. The river empties into the south end of the lake, and runs out at the east side, not far from its entrance, leaving the great body of the lake to the north of our passage through it.—There is a trading house on the west bank, near the mouth of the river, which is occupied, in winter, by a clerk of Mr. Aitkin. From Lake Travers we passed by a broad channel one hundred yards long, into another small lake, and, half a mile above this, came to the forks of the river. The branches are of nearly the same breadth, about forty feet, but the stronger

current of the right hand branch denoted it much the larger. We ascended the left or east branch, as we had intended, which soon narrowed to twenty feet breadth, and in a distance of ten or twelve miles, brought us to Lake Rahbahkanna, or Resting lake, a pretty little lake, four miles in diameter, and nearly round, with a low beach of smooth pebbles all round it. We encamped a few miles above this lake, at 7 P. M., having come this day, by my estimate, fifty-five miles. Our course to Lac Travers was north-west; from the latter, nearly south.

JULY 12.—This was a rainy, disagreeable day, and the moschetoes were numerous, hungry, and extremely annoying, but we travelled, notwithstanding, at our usual speedy rate. Our course has been south, and the valley of the river was savanne and tamrack and cedar swamp, but generally narrow, about half a mile broad, with low ridges and a miserable growth of pine bordering it on both sides. The river has become very small and somewhat rapid; and we have encamped after making a portage of two miles round a chain of rapids. One of our Indians killed a deer this morning, and we saw many more during the day. This country is so very remote and dreary, that the Indians seldom visit it, and the deer are more abundant than about the river below; ducks are also very numerous in the savannes where there is wild rice. Journey 52 miles.

JULY 13.—We ascended the river in our canoes ten miles farther, to a little lake, (Usaw-way, or Perch lake,) about two miles long and half a mile broad; the river was very narrow and crooked, through a low, narrow meadow, and a little above this lake we left it; *seeing that we had now traced this smaller branch of the Mississippi into the very swamps and meadows, from the drainage of which it takes it rise.*

From here we set off, over land, in a southwest direction, to reach Lac La Biche, represented as the source of the larger branch. Our canoes and baggage being very light, all was transported at one load, one man carrying the canoe, and the other the baggage of each of the party. In this way we made a portage of six miles in four hours, and struck the lake, the object of our search, near the end of its southeastern bay. The first mile of the portage was through a tamrack swamp, and the remainder, excepting a little lake of 300 yards diameter, was over pine ridges of the poorest character imaginable. The soil was almost pure sand, and the pine was stinted and mostly of the *scrub* species, (pinus banksianus,) which, hung as it was with lichens, and no other growth, not even a bush or shrub, mixed with it, presented a picture of landscape more dismal and gloomy than any other part of this miserably poor country that we had seen. Not a bird or animal, scarce even a fly, was to be seen in the whole distance of this portage, and it would seem that no kind of animal life was adapted to so gloomy a region.

From these hills, which were seldom more than two or three hundred feet high, we came suddenly down to the lake, and we embarked and passed nearly through it to an Island, near its west end, where we remained one or two hours.

We were now sure that we had reached the *true source* of the great river, and a feeling of great satisfaction was manifested by all the party; Mr. Schoolcraft hoisted a flag on a high staff, on the Island, and left it flying.

Lac La Biche is about seven miles long, and from one to three broad, but is of an irregular shape, conforming to the bases of pine hills, which, for a great part of its circumference, rise abruptly from its shore. It is deep, and very clear and cold, and seemed to be well stocked with fish. Its shores show some boulders of primitive rock, but no rock in place, and are generally skirted near the water with bushes. The island, the only one of the lake, and which I have called Schoolcraft island, is one hundred and fifty yards long, fifty yards broad, and twenty or thirty feet elevated in its highest part; a little rocky in boulders, and grown over in pine, spruce, wild cherry, and elm.

There can be no doubt but that this is the *true source and fountain of the longest and largest branch of the Mississippi.* All our information that we had been able to collect on the way, from traders and Indians, pointed to it as such; and our principal Indian guide, Yellow Head, who has proved to us his close intelligence of the country, represents the same.—He has formerly hunted all around it, and says there is a little creek, too small for even our little canoes to ascend, emptying into the south bay of ths lake, and having its source at the base of a chain of high hills, which we could see, not two miles off, and that this is the only stream of any description running into it. In fact, the whole country showed that there was no stream beyond, for the lake was shut in on all sides by pine hills, and the only opening through them was that by which it discharged itself. To the west we could see distinctly a range of almost mountains, covered with pine, which was undoubtedly the chain dividing us from the waters of Red river.

It will be seen from my map, that Lac La Biche is but little west of *south* from Cass lake, and almost due south from Lac Travers, which is a different position from that assigned to it on published maps, where it is invariably represented north of Cass lake. There is, however, a little stream, Turtle river, entering Cass lake from the north, in the route or traders to Turtle lake and Red lake, but it is a very small and insignificant stream, and is only forty five miles in length.

We left Lac La Biche, from its northern bay, having coasted nearly its whole circumference, and found the Mississippi, at its very egress from the lake, a respectable stream; its channel being twenty feet broad and two feet deep, and current five mile per hour. Its course was northwest and soon ran through a chain of high pine hills, where the channel contracted very much, and numerous rapids occurred of very great fall over boulders of primitive rock; the river running, for the distance, in a deep ravine.—We descended twenty five miles and encamped.

After this general view, the more complete picture of Mr. Schoolcraft will not come amiss.

A fog prevented our embarking until five o'clock in the morning, (13th) and it was then impossible to discern objects at a distance. We found the channel above the Naiwa, diminished to a clever brook, more decidedly marshy in the character of its shores, but not presenting in its plants or trees, any thing particularly to distinguish it from the contiguous lower parts of the stream. The water is still and pond-like. It presents some small areas of wild rice. It appears to be a favorite resort for the duck and teal, who frequently rose up before us, and were aroused again and again by our progress. An hour and a half diligently employed, brought us to the foot of Ossowa Lake. We halted a moment to survey it. It exhibits a broad border of aquatic plants, with somewhat blackish waters. Perch abound in it. It is the recipient of two brooks, and may be regarded as the source of this fork of the Mississippi. We were precisely twenty minutes in passing through it. We entered one of the brooks, the most southerly in position. It possessed no current, and was filled with broad leaved plants, and a kind of yellow pond-lily. We appeared to be involved in a morass, where it seemed equally impracticable to make the land, or proceed far by water. In this we were not mistaken; Oza Windib soon pushed his canoe into the weeds, and exclaimed, *Oma, mikunna,* (here is the portage.) A man who is called on for the first time, to debark, in such a place, will look about him to discover some dry spot to put his feet upon. No such spot however existed here. We stepped into rather warm pond water, with a miry bottom. After wading a hundred yards or more, the soil became firm, and we soon began to ascend a slight elevation, where the growth partakes more of the character of a forest. Traces of a path appeared here, and we suddenly entered an opening affording an eligible spot for landing. Here our baggage was prepared for the portage. The carbonaceous remains of former fires, the bones of birds, and scattered camp poles, proved it to be a spot which had previously been occupied by the Indians. The prevailing growth at this place, is spruce, white cedar, tamarack and grey pine. We here breakfasted.

Having followed out this branch of the Mississippi to its source, it may be observed, that its existence, as a separate river, has hitherto been unknown in our geography. None of the maps indicate the ultimate separation of the Mississippi, above Cass Lake, into two forks. Little surprize should therefore be manifested that the latitude of the head of this stream is found to be incorrect. It was not however to be expected that the inaccuracy should be so great as to place the actual source, an entire degree south of the supposed point. Such however is the conclusion established by present observations.

The portage from the east to the west branch of the river, is estimated to be six miles. Beginning in a marsh, it soon rises into a little elevation of white cedar wood, then plunges into the intricacies of a swamp matted with fallen trees, obscured with moss. From this, the path emerges upon dry land. It soon ascends an elevation of oceanic sand, having boulders, and bearing pines. There is then another descent, and another elevation. In short, the traveller now finds himself crossing a series of deluvial sand ridges, which form the height of land between the Mississippi Valley and Red river. This ridge is locally denominated Hauteur des Terres, where it is crossed in passing from Lac Plaie to Ottertail Lake, from which point it proceeds northward, separating the tributaries of the River des Corbeau from those of Red River. It finally subtends both branches of the Mississippi, putting out a spur between the east and west fork, which intersects the portage, crosses the west or Itascan fork about the point of the Kakábionce, or Little Rock Falls, and joining the main ridge, passes northeastwardly of Lac Travers and Turtle Lake to Red Lake. It is, in fine, the table land between the waters of the Hudson's Bay and the Mexican Gulf. It also gives rise to the remotest tributaries of the river St. Louis, which, through Lake Superior and its connecting chain, may be considered as furnishing the head waters of the St. Lawrence. This table land is probably the highest in Northwestern America, in this longitude.

In crossing this highland, our Indian guide, Oza Windib, led the way, carrying one of the canoes, as his portion of the burden. The others followed, some bearing canoes, and others baggage. The whole party were arranged in Indian file, and marched rapidly a distance—then put down their burthens a few moments, and again pressed forward. Each of these stops is called a *posé* by the voyegeurs, and is denominated Opugidjiwunon, or a place of putting down the burthen, by the Indians. Thirteen of these rests are deemed the length of the portage. The path is rather blind, and requires the precision of an Indian eye to detect it. Even the guide was sometimes at a loss, and went forward to explore. We passed a small lake, occupying a vale, about midway of the portage, in canoes. The route beyond it was more obstructed with underbrush. To avoid this, we waded through the margins of a couple of ponds, near which we observed old camp poles, indicating former journies by the Indians.

The weather was warm, and not favorable to much activity in bird or beast. We saw one or two species of the falco, and the common pigeon, which extends its migrations over the continent. Tracks of deer were numerous, but travelling without the precaution required in hunting, we had no opportunity of seeing this animal on the high grounds. It was observed in the valleys of the river, on both branches. Ripe strawberries were brought to me, by the men, at one of the resting places. I observed a very diminutive species of the raspberry, with fruit, on the moist grounds. Botanists would prabably deem the plants few, and destitute of much interest. Parasitic moss is very common to the forest trees, and it communicates a peculiar aspect to the grey pine, which is the prevailing growth on all the elevations.

To the geologist, the scene is one of interest.—The boulders of granite, and other primitive strata, occurring on the surface, remind him of the original position of these masses, in the system of nature and indicate revolutions affecting the earth's surface, which have widely changed both the postion and form of these solid materials. When the soil itself is examined, it adds further evidences of such changes. We may refer its sand to consolidated strata of this mineral which have been broken down by oceanic action, and distributed in the remarkable ridges and elevations, which now characterize the face of the country. In whatever light the subject is viewed, it seems difficult to resist the conclusion, that water has been the cause, under Providence, in effecting these changes, and that the highest grounds in this region, have been subjected to the peculiar influence which this element alone exerts in the work of attrition and deposition of strata, solid or diluvial. It might be interesting to inquire, in what manner this agent of change was withdrawn, and whether a current was created toward either of the cardinal points. It would aid this inquiry to observe, in which direction the debris and soils were deposited in the heaviest masses? How far granite boulders had been carried from their beds? And whether wood, bones, and other organic remains had been subjected to like removals? We think these accumulations are abundantly witnessed in casting the eye down the Mississippi valley, with a measured decrease in the size and weight of the pulverized masses, in proceeding from the head to the mouth of this river. It is thus evident, that the heaviest boulders are found on its upper branches, while they become rare in its central plains, and disappear altogether, long before its entrance into the deltas at its mouth. And this remark may be coupled with the accounts given by travellers of the bleak, and denuded, and sterile character of the northern rock formations.

But we have no leisure to devote to this investiga-

tion, and must proceed with the narrative that is before us. Every step we made in treading these sandy elevations, seemed to increase the ardor with which we were carried forward. The desire of reaching the actual source of a stream so celebrated as the Mississippi—a stream which La Salle had reached the mouth of, a century and a half (lacking a year) before, was perhaps predominant: and we followed our guide down the sides of the last elevation, with the expectation of momentarily reaching the goal of our journey. What had been long sought, at last appeared suddenly. On turning out of a thicket, into a small weedy opening, the cheering sight of a transparent body of water burst upon our view. It was Itasca Lake—the source of the Mississippi.

Itasca Lake, the *Lac la Biche* of the French, is, in every respect, a beautiful sheet of water, seven or eight miles in extent, lying among hills of diluvial formation, surmounted with pines, which fringe the distant horizon, and form an agreeable contrast with the greener foliage of its immediate shores.—Its greatest length, is from south-east to north-west, with a southern prolongation, or bay, which receives a brook. The waters are transparent and bright, and reflect a foliage produced by the elm, lynn, maple, and cherry, together with other species more abundant in northern latitudes. The lake itself is of irregular form, which will be best illustrated by the accompanying sketch. It has a single island, upon which we landed, after an hour's paddling from the spot of our arrival and embarkation. We found here, the forest trees above named growing promiscuously with the betula and spruce. The bones of fish and of tortoise, found at the locality of former Indian camp fires, indicate the existence of these species in the lake. We observed a deer, standing on the margin of the lake. And, here, as well as throughout the lakes of the region, found the duck, teal and loon, in possession of their favorite seclusions. Innumerable shells, (a species of small helix,) were driven up on the head of the island. Other parts of the lake yield small pieces of the unio, which were found strewing the bed of the outlet And it may be here remarked, that this shell exists, in the largest and heaviest species heretofore known, in the lower parts of this stream—the Mississippi having its origin here.

The outlet of Itasca Lake, is perhaps ten to twelve feet broad, with an apparent depth of twelve to eighteen inches. The discharge of water appears to be copious, compared to its inlet. Springs may, however, produce accessions which are not visible, and this is probable both from the geological character of the country, and the transparency and coolness of the water.

The height of this lake above the sea, is an object of geographical interest, which, in the absence of actual survey, it may subserve the purposes of useful inquiry, to estimate. From notes taken on the ascent, it cannot be short of one hundred and sixty feet above Cass Lake. Adding the estimate of 1330 feet, submitted in 1820, as the elevation of that lake, the Mississippi may be considered to originate at an altitude of 1490, say 1500 feet, above the Atlantic Its length, assuming former data as the basis, and computing it, through the Itascan, or west fork, may be placed at 3160 miles, one hundred and eighty-two of which, comprises an estimate of its length above Cass Lake. Its general course, in *ascending*, above the latter point, is north of west as far as Lac Travers. Then south to its primary forks which is continued, following up the east fork to Kubbakunna Lake, and for some distance further. It then varies a short distance north and northwest, then southwest and south, and finally southwest, to its main source in Ossowa Lake. The portage thence to Itasca Lake, is west southwest. Both these lakes appear to rise in springs, on the height of land. They are separated by about six miles of country. Their latitude, we had no means of accurately determining. From daily notes of the courses and distances, kept by Lieut. J. Allen, as indicated by a compass and watch, their position, is, however, shown to be *southwest*, and not, as heretofore supposed, *northwest* of Cass Lake.—They are, in fact, a little south of west from Leech Lake, which is placed, on our best maps, in forty-seven degrees sixteen minutes. The highest northing attained by the Mississippi, is on the great diluvial plateau, containing the contiguous waters of Lake La Salle, Marquette and Travers, which cannot vary more than a few minutes, from forty-eight degrees. These facts will explain the error of the elder geographical writers, who supposed that the parallel of forty-nine degrees would intersect the Mississippi. Its origin in the remote and unfrequented area of country between Leech Lake and Red river, probably an entire degree of latitude south of Turtle Lake, which still figures on some of our maps as its *source*, thrown both the forks of this stream out of the usual route of the fur trade, and furnishes, perhaps, the best reason why its actual sources have remained so long enveloped in obscurity.

Such is the lonely and beautiful source whence the Father of Rivers derives his birth, Springing like a young warrior from the woods—with veins unpolluetd by one bad commingling current—overpowering and annihilating a hundred opposing others in his course—still, without change or a taintin h s character, until in fierce encounter with one rude and foulmouthed rival—powerful as himself—he vanquishes, indeed, but wears forever more a sullen stain upon his feature, and sweeps away a bloated conqueror, to hide his doubtful honors in the sea.

The fatigues and privations endured by the party in penetrating to this point, were such as never enter into the dreams of "Gentlemen who sit at home at ease." We have preferred, however, giving the glorious result of their labor to dwelling upon the anxious steps by which it was attended. We have elsewhere remarked, that more than an equal share of this exposure fell to the young officer who commanded the military escort of the expedition, and who, tho' eminently qualified by his attainments, his natural abilities and character to reap honor from such an expedition, is scarcely mentioned by his companion. It is now with extreme regret, that we find ourselves compelled, before closing this notice, to allude to an affair which places the conduct of Mr. Schoolcraft toward his young comrade in a light that calls for the severest reprehension. One cannot but admire the marked moderation with which Mr. Allen Speaks of the singular and unaccountable desertion described in the following extract from his journal:

JULY 29, (SUNDAY.)—Mr. Schoolcraft had made it a rule not to travel with his party, on this expedition, on Sunday, aud, supposing he would observe the same on this day, I confidently expected to overtake him before night. I was particularly anxious to do so, inasmuch as I had now no *gum* for the repair of my canoes, and I knew he had an abundance; and I wished, moreover, to get, through his means, at the first Indian village, two Indians to steer my canoes; by which my men could be saved from much of the wading and consequent hardship and exposure, of the method of ascending rapids that the want of competent steersmen had forced me to adopt; and by which they were now so much exhausted, and bruised in their feet and legs, as scarce to be equal to the exertions still necessary, and required of them. I accordingly urged forward as much as possible, and got to the site of Mr. Schoolcraft's encampment in the afternoon, where I learned, by a note left for me by Dr. Houghton, that the whole party had left, two and a half hours before, with an intention on the part of Mr. S. not to wait for me any where on the route, but to proceed home with all possible speed, giving as a reason for this measure, that the river was falling, and any delay but increased the difficulty of ascending it. I was dissatisfied with this proceeding of Mr. S. and deemed it unwarrantable by the official relations in which we stood to each other, inasmuch as I was thereby deprived of the services of the surgeon and interpreter, to which I considered myself rightfully entitled within the intention of the department, so far as such services might be necessary for the safety of the detachment, and to enable me to execute my instructions. These gentlemen had been employed for the purposes of the expedition, and as the execution of certain of those purposes had been separately assigned to me, I had a right to expect that the means provided for their execution shoul I not be withheld from me by the power to whom they were entrusted by the department to control; but by this sudden and unadvised withdrawal of those means out of my reach, I was not only embarrassed in the performance of an appropriate duty, but placed in a situation of extreme inconvenience, and even danger, which could not have been anticipated or intended by the department in the project of the expedition. It is not to be supposed that the department would require soldiers to travel through such a country as this, and encounter the extraordinary exposure and danger incident to their transporting themselves, without some provision of medical aid; and still less could it be deemed practicable for a detachment of troops to effect a journey through an unknown, wild, inhospitable Indian country, without guides of any kind to direct, or an interpreter, through whose means to obtain guides or necessary geographical information. But such was my situation now; I had this route to travel, of which I neither knew the length or direction, the quantity or character of its difficulties, or the time and means that would be required to overcome them. For supposing that I was to travel it with Mr. Schoolcraft, who had *guides*, I had not made any useful inquiries respecting it. In this embarrassment, I would have turned back and sought another route home; but, from the number of rapids which I had already ascended, I supposed there could not be many more to the summit of the river: and that, consequently, it was as easy to go forward as back. and particularly as, with my present means, it was less difficult to ascend than descend rapids. Moreover, by the route of Prairie du Chien, I could not now hope to reach fort Brady for a long time, in which apprehensions, with the commanding officer there, for my safety, as he could not hear of me after the return of Mr. S., might, I supposed, lead to measures which a more speedy return by this route might avert. And again, Dr. Houghton informed me in his note that he would wait for me at La Pointe, in Lake Superior; that we might pursue a previous arrangement, by which he was to travel home with me, that we might make some further examinations along the lake: and, unless I called there for him, he could not, probably, get home this fall. These consideartions induced me to continue the route, bad as the prospect was of finding it.

But of Mr. Schoolcraft, it is subject of just complaint that he has separated himself from me at a time when I most depended on him, and when, knowing, as he did, the unfitness of my men for the sole management of canoes on this difficult route, he must have been fully aware of the great exposure and fatigue which I must encounter in the accomplishment of this journey without *his assistance*, which he had now withdrawn, but which it was in his power and was his duty to afford.

Had Mr. Schoolcraft told me at Fort Snelling that it would be best for me to perform the remainder of the trip alone, and on my own resources, I might there have secured sefficient resources, or, being relieved from the escort duty of protection to his party, I might have returned home by another and less difficult route, which I probably would have done. But by a strange interpretation or disregard of his official relation to the escort, he has led it, ignorant of such a contingency, into a situation of difficulty not compatible with its separate means of resistance, and there left it to encounter the difficulty as it best might.

I continued a few miles above Mr. Schoolcraft's encampment, and stopped for the night, having given up all hope and prospect of overtaking him. My men having been in rapids most of this day also, much worn out and discouraged; and my canoes leaked badly, and could not be repaired for want of gum.

August 3.—The river has become so low that we have to wade over all the rapids, *which seem to be interminable*. Many of them, to-day, were over shelving sandstone rock; the fragments of which, broken and strewed in the channel, have cut up my men's feet, and the bottoms of the canoes, horribly. Made about the same distance as yesterday.

August 4.—Passed a long expansion of the river, grown over with wild rice, on the east side of which is an Indian village, of seven or eight lodges, with gardens of potatoes, squashes, and corn, adjacent. This is Keppameppa's permanent village; but all the Indians were now absent, hunting or fishing.—Twelve or fifteen miles above this village, we came to another expansion, or narrow rice lake, five or six miles long, the upper end of which receives Ox river; the St. Croix coming in below Ox river, on the west side. From my ignorance of the route, I was near getting lost at this place, by following up the wrong river. A broad, plain channel, with a current all the way, leads up, through the rice, to the mouth of Ox river; but the St. Croix, which is here the smaller of the two rivers, comes in, as it were, on one side of the rice pond, and has its mouth, in a measure, concealed by the grass growing in it. Each canoe passed in succession to the mouth of the former river, without noticing the latter; but I had remarked, as I passed, an opening in the woods, as though a stream came in; and after entering the mouth of the wrong river, I went back, to be satisfied as to this appearance, and found the stream; but from its being smaller than the other, was still in doubt which to take, till I had followed it up a

short distance, to a rapid, where I observed, on a rock in the bottom, a little red spot, which on examination, proved to be red lead paint rubbed from Mr. S's. canoe, which had touched the rock. This little circumstance determined this to be the proper route, and saved me from the error of taking the other; which, If I had done, might have led to further error, and been attended with serious consequences; for, if I had been lost for many days in this poor country, till my provisions were exhausted, starvation would have been almost inevitable.

We do not know what excuse Mr. Schoolcraft proposes to himself for this unaccountable and inhumane desertion which is mentioned with so much mildness by his forgiving companion, but we do know that the rigid observance of the Sabbath among his men, which he takes so much pains to parade in his pages, does not weigh a feather with us when balanced against an act so un-Christian-like: an act which, even in that country, where life is certainly held a cheaper commodity than it is here, was regarded with indignation and dismay. The escape of Mr. Allen was almost a miracle: for he had not only, with the most inadequate means, to contend with the well-known difficulties of his situation—but unknown wholly to themselves—his little band were travelling through an enemy's country, and liable to be cut off at any moment. The Sauk and Fox war had broken out while the party were far in the wilderness, and scalps were in high request in their present neighborhood. Our view of this matter, however, will not prevent us from doing justice to some most valuable additions to our knowledge of Indian life in Mr. Schoolcraft's book when we again return to it, which we propose more than once to do. †

Naval Stories, by *William Legget*. 1 Vol. 18mo: New York, *Carville*.—The Nautical Tales and Sketches, now for the first time collected in this little volume, have excited so much attention in the various ephemeral publications, where they have from time to time appeared, that we wonder at their not having been before embodied in a durable form. The reputation of their author, as one of our most vigorous and graphic writers in this kind of literature, will ensure their cordial reception in this new guise—nor will they, with many, need the recommendation conveyed by the following specimen of their contents. It is a thrilling description of *an encounter at sea*.

For more than an hour did the Active flee along in this way, like a wild horse foaming and stretching at his utmost speed, driven onward in the van of the tempest, and exposed to its fiercest wrath. At length, the first fury of the gale passed away, and the wind, though still raging tempestuously, swept over with less appalling force. The ocean, now, as if to revenge itself for its constrained inactivity, roused from its brief repose, and swelled into billows that rolled and chased each other with the wild glee of ransomed demons. Wave upon wave, in multitudinous confusion, came roaring in from astern; and their white crests, leaping, and sparkling, and hissing, formed a striking feature in the scene. The wind, fortunately, issued from the right point, and drove the Active towards her place of destination. The dun pall of clouds, which from the commencement of the gale had totally overspread the heavens, except in the quarter whence the blast proceeded, now began to give way, and a redish light shone out here and there in long horizontal streaks, like the glow of expiring coals between the bars of a furnace. Though the first dreadful violence of the storm was somewhat abated, it still raged with too much fierceness and power to admit of any relaxation of vigilance. The commander himself still retained the trumpet, and every officer stood in silence at his station, clinging to whatever might assist him to maintain his difficult footing.

"Light, oh!" cried the lookout on one of the catheads.

"Where away?" demanded the Captain.

"Dead ahead."

"What does it look like, and how far off?" shouted the captain, in a loud and earnest voice.

"Can see nothing now, sir; the glim is doused."

"Here, Mr. Burton," cried the commander, "take this night glass; jump aloft on the foreyard, sir, and see if you can make out any object ahead. Hurry up, hurry up, and let me hear from you immediately, sir! Lay aft to the braces! Forecastle, there! have hands by your staysail sheets on both sides! foreyard, there!"——

But before the captain had finished his hail, the voice of little Burton was heard, singing out, "sail oh!"

"What does she look like, and where away?"

"A large vessel lying to under bare poles—starboard your helm, sir, quick—hard a-starboard, or you will fall aboard of her!"

This startling intelligence was hardly communicated before the vessel descried from aloft loomed suddenly into sight from deck, through the thick weather to leeward. Her dusk and shadowy form seemed to rise up from the ocean, so suddenly did it open to view, as the driving mist was scattered for a moment. She lay right athwart the Active's bows, and almost under her fore-foot—as it seemed while she pitched into the trough of an enormous sea—and the Active rode on the ridge of the succeeding wave, which curled above the chasm, as if to overwhelm the vessel beneath.

"Starboard your helm, quarter-master! hard a-starboard!" cried the commander of the Active, in a tone of startling energy.

"Starboard!" repeated the deep soleman voice of old Vangs, who stood on the quarter-neetings, his tall figure propped against the mizzen rigging, and his arm wreathed round the shroud.

"Jump to the braces, men!" continued the captain strenuously—"haul in your starboard braces, haul!—ease off your larboard! does she come to, quarter-master!—Fo'castle there! ease off your larboard staysail sheet—let all go, sir!"

These orders were promptly obeyed, but it was too late for them to avail. The wheel, in the hands of four stout and experienced seamen, was forced swiftly round, and the effect of the rudder was assisted by a pull of the starboard braces; but in such a gale, and under bare poles, the helm exerted but little power over the driving and ponderous mass.—She had headed off hardly a point from her course, when she was taken up by a prodigious surge, and borne onward with a fearful velocity. The catastrophe was now inevitable. In an instant the two ships fell together, their massive timbers crashing with the fatal force of the concussion. A wild shriek ascended from the deck of the stranger, and woman's shrill voice mingled with the sound. All was now confusion and uproar on board both vessels. The Active had struck the stranger broad on the bows, while the bowsprit of the latter, rushing in between the foremast and the starboard forerigging of the Active, had snapped her shrouds and stays, and torn up the bolts and chainplates, as if they had been thread and wire. Staggering back from the shock, she was carried to some distance by a refluent wave, which suddenly subsiding, she gave such a heavy lurch to port that the foremast—now wholly unsupported on the starboard side—snapped short off like a withered twig, and fell with a loud plash into the ocean.

"The foremast is gone by the board!" shouted the officer of the forecastle.

"My God!" exclaimed the captain, "and Charles Burton has gone with it! Fo'castle there! Did Charles Burton come down from the foreyard?"

"Burton! Burton! Burton!" called twenty voices, and "Burton!" was shouted loudly over the side; but there was no reply!

In the meanwhile another furious billow lifted the vessel on its crest, and the two ships closed again, like gladiators, faint and stunned, but still compelled to do battle. The bows of the stranger this time drove heavily against the bends of the Active just abaft her main-rigging, and her bowsprit darted quivering in over the bulwarks, as if it were the arrowy tongue of some huge sea monster. At this instant a wild sound of agony, between a shriek and groan, was heard in that direction, and those who turned to ascertain its cause saw, as the vessels again separated, a human body, swinging and writhing at the stranger's bowsprit head. The vessel heaved up into the moonlight, and showed the face of poor Vangs, the quarter-master, his back apparently crushed and broken, but his arms clasped round the spar, to which he appeared to cling with convulsive tenacity. The bowsprit had caught him on its end as it ran in over the Active's side, and driving against the mizzenmast, deprived the poor wretch of all power to rescue himself from the dreadful situation. While a hundred eyes were fastened in a gaze of horror on the impaled seaman, thus dangling over the boiling ocean, the strange ship again reeled forward, as if to renew the terrible encounter. But her motion was now slow and laboring. She was evidently settling by the head; she paused in mid career, gave a heavy drunken lurch to starboard, till her topmasts whipped against the rigging of her antagonist, then rising slowly on the ridge of the next wave, she plunged head foremost, and disappeared for ever.—One shriek of horror and despair rose through the storm—one wild delirious shriek! The waters swept over the drowning wretches, and hushed their gurgling cry. Then all was still!—all but the rush and whirl of waves as they were sucked into the vortex, and the voice of the storm which howled its wild dirge above the spot.

We have a score of Magazines upon our table, which, as they have been twice crowded out of our list of Saturday's notices, shall be duly taken care of during the week. †

[*From the Journal of Commerce.*]

Very late from Mexico.—The brig William, Capt. Martin, which arrived on Saturday in the very short passage of 16 days from Vera Cruz, brings papers from that city to July 2d, inclusive.

Almost the whole country has declared for the plan of Cuernavaca, or for other plans of similar import, i. e. for the overgrown power and innumerable abuses of the church, and against the reforms introduced by the last Congress. We are clearly of opinion that those reforms were too sweeping for the infancy of the nation's enlightenment, but the reaction which has now taken place, throws the country back nearly to the point where it stood when it first shook off the yoke of Spain. There is however no doubt of the complete success of the reaction. In addition to the States before mentioned which have fallen in with the plan of Cuernavaca, may be added Mexico, Jalisco and Morelia, besides innumerable cities and villages in every part of the Republic. Queretaro, which undertook to resist the new order of things, has been entered and garrisoned by a large body of government troops. Puebla was closely besieged, and may be considered as fallen. Thus far, no blood has been shed, of any consequence, and none probably will be. The revolution is virtually finished already.

A conducta arrived at Vera Cruz from Mexico on the 27th June.

Gen. Santa Anna had gone to Tacubaya for the benefit of his health.

The ecclesiastical establishments of the Federal District have volunteered a loan of $40,000 to the government at 6 per cent.

The Mexico Fenix, which espoused the cause of the dispersed Congress, has been discontinued.

The City Council of Vera Cruz, on the 20th June, celebrated an Acta, declaring, among other things, that laws passed relative to matters of religion, contrary to the Constitution, were null and void. In consequence of this pronunciamento, says the Censor of the 22d, "the political chief, the venerable parochial Curate, and the Secretary of the Chiefship of the department, accompanied by an immense and brilliant concourse of people last evening at 6 o'clock, opened the Churches and Convents of this city which had been suppressed by the unconstitutional decree of the Legislature of the State."

Vera Cruz, June 19.—Under the operation of the late laws, the people have seen the bishops and prebendaries persecuted,—the convents where they used to go to render their adoration to God and saints, shut up—the religious orders turned into the streets—the goods which they possessed with a legitimate title, confiscated, and applied to objects different from those for which they were presented—the temples seized by force, to be appropriated to profane uses,—and all this has made them think that the true meaning of the word Reform is Destruction. They have therefore become alarmed, and put themselves upon the defensive.

Mexico, June 13.—At Peubla the civic militia are deserting, and coming over in considerable parties to the forces of the supreme government. These forces are in possession of the out posts, and with 1500 men under the command of St. Bringas, will soon terminate the resistance of the factious without bloodshed. The scarcity of provisions in the town is already great, and as many families as can, are leaving it.

Mexico, June 18.—The dissidents at Puebala are driven nearly to the centre of the city, which will very soon be occupied by the troops of the Government. [There appears to have been very little loss of life.]

Vera Cruz, June 16.—The honorable Congress, which was called together for the 12th ult., has not convened, and probably will not; for of the Repre-

sentatives, besides those composing the Council of the Government, some are in Mexico, others in Puebla, which has declared against the supreme Government of the Union, others in the parts of the State, which have declared against the reforms that have been enacted.

Mexico, June 12.—Of the measures of Congress which have excited the greatest disapprobation, one is the confiscation of the property of the Duke de Monte Leone.

Tohica, June 7.—Generals Moctezuma and Cortazar have embraced the cause of religion and of the towns that have proclaimed it, thus disappointing the hopes of the enemies of order.

Mexico, June 15.—Only 20 days have elapsed since the pronunciamento of the town of Cuernavaca, and already almost the whole republic has fallen in with the plan.

Mexico, June 13.—An uninterrupted series of pronunciamentos in favor of the plan of Cuernavaca, shows in the clearest manner the state of public opinion relative to the laws of proscription and rapid reform.

Mexico, June 10.—The documents which we insert, show that the town of Acapulco, Costa Chica, and the whole South, is at the disposition of the Government.

Tuspla, May 30.—The Rev. Bishop left San Cristobal on the 23d inst. via Palengue, in compliance with the decree of the General Congress of April 22d, banishing him from the Republic.

Two days later from England.—By the *Virginian*, Capt. Harris, we have received our regular files of English papers to the 7th of June inclusive. They contain no news of moment.

A bill has been brought into Parliament to abolish imprisonment for debt, except in cases of fraud, and to amend the law of debtor and creditor: also a bill to render uniform the execution of wills, and of all deeds relating to personal property: and a bill to facilitate the enfranchisement of copyholds, and to bring gradually all lands in England and Wales under the same tenure of free and common soccage.

Mr. Robinson also brought forward a motion for an address to the Crown "respecting the rights of British subjects to prosecute the fisheries on the coast of Newfoundland, and in the bays, harbors, and rivers thereof." After a short discussion the hon. member withdrew his motion, on the understanding that Government would immediately take up the subject.

Speaking of the present condition of parties, the Times says—

It is clear from the deprecatory tone adopted by Lord Grey towards the close of his speech in reply to the Earl of Wicklow, and when speaking of possible conclusions between the House of Lords and Commons, that the noble Earl is conscious of holding the reigns of power no otherwise than at the will and pleasure of the Conservative party, and that whether in cases of local or general reforms—whether in that of the Warwick election Bill or of the promised measure for the reform of the Church of Ireland—the determination of the Tory Lords is, that nothing shall be done which Ministers propose to do. Lord Grey and his party have already avowed their fear of the House of Lords, and the propriety of yielding to their wishes. The House will give the Ministers plenty of opportunities of Submission, but is this a position for any Minister with a heart in his body to stand on?

Mr. Robert Grant is, we believe it is now fixed, to proceed some time hence to the East Indies as Governor of Bombay, in the room of the Earl of Clare, who comes home

Mr. Grant is Judge Advocate, and one of the Members for Finsbury. We have not heard whether there be any foundation for the rumoured appointment of the Earl of Randor to the Post Office.—[Courier.]

We mentioned yesterday the arrival of Dr. Bowring from Paris with the Ordonnance. By that we are pleased to see that the prohibition has been removed against importing cotton twist, which is henceforth to be admitted, paying a duty of from seven to eight francs the kilogramme. This change will take place on Sept. 1st. Cachemere shawls manufactured out of Europe are to be admitted, paying a duty of twenty per cent. on their value. Lace made of cotton is to be admitted paying the same duty as lace made of thread, namely, five per cent. on the value. Iron cables are among the things admitted paying the same duty as iron in bars. Watches, Russia leather, rum, are also among the articles now admitted into France on the payment of duties. Various articles, such as raw and dyed silk, skins, &c., are also to be permitted to be exported on the payment of certain duties. The tonnage duties on British vessels is reduced from 3fr. 75c. to 1fr. This is the beginning of a more liberal commercial intercourse between the two countries, which we hope to see much extended.

[*From the London Times, June 7.*]

We have received, by express, the Paris papers of Thursday. The *Moniteur* states, that the French Government had received all the ratifications of the quadripartite treaty signed in London on the 22d of April. The *Journal des Debats* gives a summary of last Monday's proceedings in the House of Commons, taken from the *Times* of Tuesday, which had been received at the office of that paper from London, by express. The anxiety in the political circles in Paris, and the Bourse, about the result of the debate on Mr. Ward's motion, appears to have been very great on Monday, and had given rise to many rumors on that subject, some of which had affected the prices of the funds. The news from England, and from Portugal through England, had, as might have been expected, occasioned an unusual bustle at the Bourse on Thursday. The hofders of Miguelite scrip had in vain exerted themselves to get rid of their blank paper at any price. Great efforts were used on the other hand, to persuade them that the Miguelite loan will be acknowledged by the Queen's Government. Some of the papers publish an official account, by General Voirol, commander *ad interim* at Algiers, of an attack made by a detachment of French troops, on the tribe of the Hadjoutes, in consequence of repeated depredations committed by the latter on the Beni Khalil, a tribe who are in alliance with the French. The Hadjoutes were defeated and dispersed, and their goods and cattle taken and made over to the Beni Khalil. These papers have no foreign news of any importance besides that which relates to England and Portugal.

The *Monsteur Algérine* of the 24th ult. contains the following order of the day of Lieutenant-General Voirol:—"The Lieutenant General commanding, *ad interim*, Corps of Occupation of Algiers, makes known to the army a new exploit of the brave garrison of Boujela. On the 29th of April, they Kabyles having advanced to attack our working parties on the side of the plain, the superior officer ordered the squadron of the 3d Regiment of Chasseurs of Africa to march againct them, supported by several companies of Zoares. These movements, effected with great promptitude, were attended with complete success. The Kabyles were overtaken and massacred by the cavalry. The few who escaped from them fell by the balls and bayonets of the Zoares."

A letter from Algiers has the following:—"When I acquainted you with the treaty conducted between Abdol Kader and General Desmichels, I warned you against considering it as a guarantee for the perfect tranquility of the natives. My apprehensions have just been realized by the necessity for driving back the Hadjoutes to the center of their tribe. About 300 horsemen of the plain joined our cavalry, but they did not act with great energy, which must be attributed to the uncertainty in which the natives are kept with regard to our remaining in Africa.—We killed 60 of the enemy, and burnt one Douar.—On our side, we had five men more or less dangerously wounded."

Smuggling.—A novel attempt at smuggling was lately detected in France. A waggon with five horses, laden with enormous masses of stone, was stopped while entering the town of Lille, and upon breaking some of the stone there were found to have been hollowed, and filled with cotton twist and English net. The waggon was conducted to the Custom-house, and the driver sent to prison. It appears the waggon and horses had been hired for this expedition, and that the owner was a total stranger to the fraud.

Later from Europe.—By the *Caledonia* from Liverpool, London papers of 16th June are received.

The pretender to the Spanish throne, *Don Carlos*, had arrived at Portsmouth Roads, on board the British line-of-battle-ship *Donegal*. He had not landed, as it was not yet determined what disposition was to be made of him.

As the Donegal left Lisbon, she spoke the British frigate Stag, going into Cascaes bay for provisions, and having on board Don Miguel and his suit, with whom, after victualling, she was to proceed to Genoa.

Thus the two disturbers of the Spanish and Portuguese Peninsula being disposed of, the Governments of the two countries would be more at leisure to turn their attention to the needful reforms. A commencement, it will be seen—so far as decrees go—had been made in Portugal.

A Paris paper, having published a long article to prove that though war might decide political, it could not and should not financial questions, and hence argued that the loans contracted in 1833 for *Don Miguel*, must be respected and paid by *Donna Maria's* government—the Chevalier de Lima, Portuguese Minister in Paris, published an answer, in which, referring to a decree issued by the Regency in the name of Donna Maria, in 1830, declaring that no loans raised by *Don Miguel* would be respected by the Portuguese nation, he affirms that nothing had occurred to alter the decision, and that assuredly *Donna Maria* would not re-imburse a loan, of which the proceeds had been spent in resisting her legitimate authority.

Spain had succeeded, it is said, in negotiating a small loan with the house of *Rothschild*; upon which occasion *le premier baron Juif*, as the great banker is called by the Paris wits, visited London, in order to have the cooperation of the English capitalists, in putting the finances of Spain upon a proper footing.

Parliament was in session, and mainly occupied about the Poor laws—which the Times complains absorb a time that might be more usefully given to the *Tithe bills*, and the bill for *the relief* of Dissenters.

[*From the London Times of June 16.*]

The private letters by the Donegal frigate, which left Lisbon on the 2d instant, with Don Carlos on board, are highly satisfactory in regard to the state of Portugal. A decree, it appears has been issued, convoking the Cortes of that country for the 15th of August; another for suppressing all the orders of friars, and applying the revenues of the monasteries to the service of the State; and a third for depriving the Douro Company of all its exclusive privileges. Among the measures for the formation of a representative system of government in Portugal, is a decree for excluding from the Upper House all those noblemen who have acknowledged the legitimacy of Miguel. Less danger seems to be apprehended now that the convocation of the Cortes has taken place, from the consequenses of political intrigue in Portugal, and it is hoped, even with respect to the most turbulent and enterprising of the rival commanders, that all will now settle down quietly.

Paris, *Saturday 4 o'clock P. M.*—A courier arrived yesterday from Madrid, bearer of despatches of the 7th inst. for the French Government, and of the Madrid Gazette up to that date. The latter has a long decree of the Regent, regulating the liberty of the press. It appears by despatches, that some serious riots occurred on the night of the 4th or 5th, at the principal theatre, arising from the discontent expressed there by some part of the audience in consequence of what they chose to consider the lenient way in which Don Carlos and his pretensions had been disposed of. A strong military force was called into the theatre, but it was not without great difficulty that something like order was at length restored. The disturbance was entirely confined to the inside of the theatre. Tranquillity remained uninterrupted out of doors up to the departure of the courier.

The Journal de Smyrne of the 10th ult. states, after accounts from Samos of the 4th, that a great part of the population were looking anxiously for the arrival of the squadron sent out by the Porte, and were prepared to submit the instant it arrived. Logothett had lost his influence, and had retired with a few followers to the fortress of Tigani, to the South of Vathi, whence he would effect his escape as soon as the squadron arrived.

The Austrian Observer of the 4th inst. has the following of the 20th ult. from Constantinople—"We learn from Smyrna that the squadron under the command of Hassan Bey, composed of one frigate, two sloops, four brigs, two schooners, and five cutters, arrived off Samos on the 5th, and that a Turkish officer had landed to demand the submission of the inhabitants. It was generally hoped that it would

not be necessary to resort to extreme measures, and that submission would be made without resistance.

A letter dated Tripoli, April 25, contains the following:—"Mehemet, chief of the rebels, and nephew of Ali Pacha, being without sufficient money to purchase a supply of ammunition, and being consequently unable to carry on the civil war he has raised with the view of obtaining the supreme power, is engaged in contriving means of flight, in order to escape the punishment which he knows will be inevitable if he falls into the hands of his legitimate Sovereign, Ali Pacha. All his followers are equally discouraged."

It is matter of complaint in various English papers and periodicals, that the Lord Chancellor, with his "fiery habits of debate, and his love of victory in discussion," lowers the tone of habitual self-command and dignified restraint which heretofore characterized the proceedings of the House of Lords.

Among the recent deaths in England, is that of *Rudolph Ackerman*, well known, even in this country, as the publisher of various works of taste. He was a Saxon by birth, emigrated to London, where he followed for a time the trade to which he was bred, of a coach-builder, and carriage-draftsman. By this latter branch, he was brought into connexion with artists, and thence was led to commence business as a print-seller. He was a munificent publisher.

A panorama of New York was about to be exhibited in London, at the last dates; that of the "Falls of Niagara" attracted crowds. Among the shows of that city, we observe one advertised as "The Breathing Napoleon. It is thus described:

SUMMARY.

Speck of another Indian War.—The National Gazette of last evening has the following paragraph.

Letters have been received in this city from General Leavensworth's head quarters on the south-western frontier, near the Arkansas river, dated 17th June. This portion of that fine command has the prospect, it would seem, of an active campaign. The Pawnees will make peace when *compelled to do so*. We give an extract.

"The dragoons are crossing and we have thus commenced the campaign. Since the 1st of May, 300 miles of road have been completed. The dragoons are moving upon it to make a peace with the Pawness. We expect to find them about 6 or 700 miles from here, and will have a peace with them, if we have to fight for it. They are killing our citizens daily, and robbing every one they can find."

A wharf at the north part of the city of Boston, on which nearly 800 tons of coal and some lumber were piled, gave way on Tuesday evening, and with all its superincumbent load, slid into the water—which is about 17 feet deep—so that the unfortunate owner of the coal will lose it wholly.

The public honors which were paid in Philadelphia on Tuesday to the memory of Lafayette, says the National Gazette, drew a large part of the city population into the streets, and a considerable number of spectators from the country. Many of the shops were closed, and business was generally suspended during some hours. No American city could furnish a Procession of a more imposing character in regard to the appearance and bearing of the men."

Congress appropriated, at its late session, *ten thousand dollars* as prize money to the officers and crew of the private armed brig *General Armstrong*, or to their legal representatives.

Lebanon Springs.—A new Post-Office is established *at the Springs*, named "Columbia Hall," Columbia county, N. Y.—Henry Hull, Postmaster.

Consecration.—On the 12th of July, the new and elegant edifice erected for the accommodation of the congregation of Christ Church, Middletown, Connecticut, under the pastoral care of the Rev. Smith Pyne, formerly of New York, was consecrated to the worship of Almighty God, by the Right Rev. Bishop Brownell.—[Churchman.]

Packet Ship Independence.—Another new and magnificent ship has just been added to the Liverpool line of *Grinell, Minturn & Co.* We had the pleasure of passing an hour on board yesterday, and were truly gratified in examining so fine a vessel, so complete in all her parts, and so admirably adapted for the purpose of carrying numerous passengers, both in the cabin and in the steerage; and of stowing a large cargo without sacrificing the qualities of a fast sailer.

The *Independence*, built by Smith & Demon, and commanded by Captain Nye, is of the burthen of 730 tons, the largest merchant ship but one probably—the Washington of this port—in the United States; and yet when launched she will not, it is calculated, draw more than 14 feet water. Her extreme length is 141 feet, and her beam 34. Her deck, save in its shear, is like that of a frigate. The arrangement of the quarter deck is excellent: without being lumbered, it has every convenience for keeping the officer of the watch and the man at the wheel from unnecessary exposure; combined with an ice house capable of stowing two tons of ice, and with other modern improvements. The cabin, of great length and height, has 15 or 18 double state rooms, separated from the dining-room by partitions of curled and birdseye maple and satin wood of unsurpassed beauty. The polish given to these woods exceeds any thing we have before seen; and this polish, we were assured, is in no wise affected by the damp sea air. The polishers were Messrs. Stackhouse & Devereux. The joiner's work is by Mr. Lattou. Among many comforts in the state rooms is a spirit lamp, so hung as to preserve always its vertical position. The ladies cabin, amidships, is most comfortably and tastefully furnished. Altogether, it is very tempting, certainly, to think that for a comparatively small sum, and with the certainty of good treatment from her gentlemanly commander, and of a passage much shorter than was made before the packet lines of this city were established—one might just step on board such a magnificent floating palace as this—make a tour in Europe, and be back in time to vote against the perish credit perish commerce candidates in November. The hard fates forbid us such enjoyment, but we do not the less say, "God speed" to the gallant ship and all who may "go down to the sea" in her.

Pennsylvania, too, it seems, from the annexed paragraph, may add gold to her more valuable products of iron, &c.

Gold Region of Pennsylvania.—It is stated in the Lancaster Journal, that veins of gold having large deposites, have been found in that country, which are thought to be as rich as any mine in the South. With her Iron and Coal, her veins of Geld, and above all, her hardy and industrious population, the Key stone State must ever continue to be a great and powerful commonwealth.

Shipwreck.——Yesterday afternoon, says the Charleston Courier of the 17th inst., the French brig Edward Eulalie, Capt. B. Frebourg, arrived off the bar in 23 days from Laguna. The E. was bound to Havre, with a cargo of dyewood. The first night out, in a gale, sprung the foremast and both lower yards, which caused them to make for this port to refit. At 5 o'clock yesterday afternoon spoke one of our pilot boats. One of the pilots from her came on board and inquired her draft of water—was informed she drew 12 feet 4 inches. He stated to the Captain he could not take charge of her in consequence of his branch being for less water, but directed him to another boat then near by, on board of which there was a full branch pilot. Capt. F. bore away and spoke him—requested him to come on board, which he refused to do, saying—there is not water enough on the bar now. I will come tomorrow and bring you in. At half past 1 o'clock this morning, while lying off and on, going in stays, struck on the North Breakers, beat over into water, and sunk. They had not time to save any thing, being indebted to the pilots of the Cora and Georgia, (who took them off the wreck,) for a sufficiency of clothing to cover them.

Mr. Edward Everett has consented, at the request of the young men of Boston, to deliver an oration on the death of *Lafayette*.

The New York University.—The following were the subjects of the orations delivered at the Commencement of the University on Wednesday last.—These exercises were followed by the conferring of degrees on the orators, who composed the senior class.

1. "Quo didicisse
Nisi rupto jecore exierit caprificus."
2. Sympathetic emotion of virtue, R. R. Crosby, of this city.
3. Influence of fictitious writings, Mathew V. B. Fowler, Newburgh, N. Y.
4. Natural evil not inconsistent with divine benevolence, William R. Gordon, New York city.
6. Decision of Character, Washington Judah, New York city.
6. Discovery of Truth, Samuel Kellogg, New York city.
7. The harmony of intellectual and moral cultivation, A. H. Lambett, South Reading, Mass.
8. Popular education the best safeguard for free institutions, Wm. McMurray, jr. New York city.
9. Females of the American Revolution, Cornelius Matthews, New York city.

Military.—At an election held in the Second Regiment New York State Artillery on the 17th inst., Lieut. Col. *George W. Heelas*, was unanimously elected Colonel, vice *Samuel J. Hunt*, Esq., elected Brigadier General.

Brooklyn.—The Common Council have purchased two acres of ground situated at the junction of Fulton and Joralamon streets, opposite to Duflon's tavern, as the site for their City Hall, and for which they have given fifty thousand dollars.

Something new in the way of Amusement is promised by Mr. Robertson, the æronaut, in an exhibition to be opened by him at Euterpean Hall. It promises to be singularly attractive, but not a word is said of its nature or form.

M. Poultney, President of the Bank of Maryland at the time of its failure, is under indictment for alleged dishonesty in administering the concerns of that bank.

☞ We learn from Mr. J. S. Wilson, from Little Egg Harbor, that the British ship Henry Grattan, 50 days from Londonderry, bound to Philadelphia, with whiskey, 200 tons of coal, and 180 passengers, ran ashore on Long Beach, Little Egg Harbor, on the 19th inst., and a very heavy sea running at the time, the ship bilged. Shortly after grounding, the Captain succeeded in getting ashore for assistance: the mate had her masts cut away, to keep the vessel from rolling. On Sunday, the 20th, the Wreckmaster succeeded in landing all the passengers and crew safe on the beach. The passengers are in great distress. One of the crew was badly hurt by the falling of the mast. The ship and cargo is a total loss. Sails and rigging saved in a damaged state. Mr. Wilson further states, that the Mate with the Captain were below: took the ship's boat with 46 passengers, he states, from the ship, about 6 o'clock on Saturday, without any oars, rudder or sails, for the beach, the current set them in and over the breakers, and it was supposed, at Eggharbour, all hands would be lost. The mate got four of the passengers to stand up on the seats and hold up a blanket for a sail. The wind blowing on the beach, they went through all the breakers, and succeeded in landing on Tucker's beach at 1 o'clock on Saturday night, all safe.

The report of Cholera at *Montreal*, is narrowed down upon the authority of a gentleman who left that city on Saturday last.

"He says that eight or ten deaths had occurred among the emigrants under the sheds provided for them, which was not at all to be wondered at. Two or three citizens also died suddenly of Cholera morbus, or perhaps of Asiatic Cholera, yet there was nothing to warrant the alarm which appeared to be felt along the road, and which seems to be springing up in this city."

The Cincinnati Gazette of 12th inst. makes no allusion to the existence of Cholera in that town; but in the weekly list of deaths for the week ending 9th inst., *six* out of *forty-three* deaths, are reported as by Cholera.]

Report of the Board of Visiters to the Military Academy.

WEST POINT, N. Y., JUNE 17, 1834.

To the Secretary of War:—Sir: In compliance with your request, the undersigned have attended, as a Board of Visiters during the general examination, at the United States Military Academy, just concluded, and have "directed their inquiries to a full and free investigation in regard to the course of instruction, both military and scientific, and to the internal police, discipline, and fiscal concerns of the institution." That these several objects of inquiry might be attended to as thoroughly and successfully as possible, the Board, at its organization, referred them to separate committees, who have presented full reports with regard to them, accompanied by some suggestions for the improvement of the institution. Copies of these reports are forwarded to you, and the Board take the liberty of referring you to them for details, while they confine their joint report to a general and brief view of the present condition of the Academy.

The fidelity of the Professors, and the assiduity and proficiency of their pupils, were tested by an examination, on the several subjects, extending over eleven days, and continued for each day eight hours.

The sciences not strictly professional, included in these examinations, were mathematics, taught here from the elements of arithmetic to the profound theorems of the integral calculus—natural philosophy, including mechanics and astronomy—chemistry, in connection with mineralogy and geology—and, lastly, rhetoric, and moral and political science.

The subjects of professional study are civil and military engineering, and infantry and artillery tactics, with the last of which are connected ballistics and pryotechny.

A part of the first two years is devoted to the study of the French language, with which a competent acquaintance is required of the Cadet.

Lastly, great attention is very properly paid, in this Academy, to the art of drawing, of which the practical applications are so frequent and important in the military profession.

The subjects combined, certainly constitute an excellent preparatory education for officers of the army, and the examinations proved that they were faithfully and skilfully taught. Marked inequalities were indeed observed in the proficiency of the Cadets, and defects remain to be corrected in the organization of some of the departments, but still the exhibition was, on the whole, highly satisfactory and gratifying.

Frequent opportunities were presented to the Board of witnessing the practical skill of the corps in infantry and artillery exercises, and their fine and soldier-like appearance in the ranks, and the accuracy with which they executed their various evolutions, proved that this essential part of the duties of a Military Academy was sedulously attended to by both officers and cadets.

The discipline of the institution was carefully examined in its various bearings, and the Board have reason to think that it is in an excellent state. The laws seem to be executed with a stern regard to the good of the service, yet with a kind and paternal feeling, and the officers and professors are believed to be generally both beloved and respected.

The internal police of the institution was found to be carefully attended to. The rooms in the barracks, occupied by the cadets, exhibited a gratifying appearance of neatness and order, while, at the same time, they give rise to regret, on account of the inadequate accommodations which they offer. The mess table is well supplied with plain, but good and wholesome food. In the event of sickness, which the Board are happy to find has been lately of rare occurrence, suitable and comfortable accommodations are provided at the hospital, with the best medical attendance.

The Board directed an inquiry to be instituted, with as much minuteness as circumstances would admit, into the fiscal concerns of the institution. The result, which will be found fully detailed in one of the reports sent herewith, is, that the accounts are kept in a correct and satisfactory manner—that the expenditures are made in accordance with the appropriations—and that a proper attention is paid to economy in the expenses of every kind. To prevent extravagance in the cadets, there is a regulation which prohibits to them the possession or use of money, or expenditure of it, except with the consent of the superintendent, who stands, with regard to them, in the place of a parent, and who, it is believed, exercises his authority with enlightened discretion.

The whole investigation of the Board, led them to the conclusion that the Military Academy is a most valuable and essential part of the army establishment of the United States; that, at a cost so low as not exceeding that of a second rate man-of-war, it prepares, and can spread over the whole country, officers instructed and capable of giving instruction in the military art; and thus, without the danger arising to liberty from large standing armies in time of peace, enables the Government to fulfil the duty which the Constitution so solemnly enjoins, of "providing for the common defence," and lastly, that if our young citizens were commissioned in the army as lieutenants, in the first instance, as they must be if this institution be abolished, they could not obtain in four years, even the same military knowledge as the Cadets, while their probation and education would be far more expensive to the country.

(Signed) G. VAN SCHOOHOVEN, President,
ALVIN BRONSON,
JAMES HOOKER,
CHAS. B. PENROSE,
H. G. COMINGE,
JNO. T. ANDERSON,
R M. PATTERSON,
ACHILLE MURAT,
WM. P. DUVAL,
WRIGHT C. STANLEY,
P. LINDSLEY,
J. L. SMITH, Captain Corps of Engineers,
JAMES LATIMER, Jr.
T. B. DALLAS, Secretary.

The undersigned freely subscribe the within report, without expressing an opinion with regard to the last paragraph.

(Signed) WM. SMITH,
J. W. SCOTT.

HEAD QUARTERS OF THE ARMY,
Adjutant General's Office,
WASHINGTON, JULY 9, 1834.

1.—Promotions and Appointments in the Army, by the President of the United States, by and with the advice and consent of the Senate, since the publication of the official Register for 1834.

1.—PROMOTIONS.

Regiment of Dragoons.

Brevet Second Lieutenant William Eustis, to be Second Lieutenant, 17th March, 1834, vice Bradford, deceased, (brevet 1st July, 1830.)

Brevet Second Lieutenant George W. M'Clure, to be Second Lieutenant, 31st May, 1834, vice Clyman, resigned, (brevet 1st July, 1830.)

First Regiment of Artillery.

First Lieutenant Joshua Howard, to be Captain, 6th March, 1834, vice Patrick, deceased.

Second Lieutenant Ebenezer S. Sibley, to be First Lieutenant, 6th March, 1834, vice Howard, promoted.

Second Lieutenant Wm. Maynadier, to be First Lieutenant, 31st May, 1834, vice Tyler, resigned.

Brevet Second Lieutenant David B. Harris, to be Second Lieutenant 6th March, 1834, vice Sibley, promoted, (brevet 1st July, 1833.)

Brevet Second Lieutenant Erastus A. Capron, to be Second Lieutenant, 31st May, 1834, vice Maynadier, promoted, (brevet 1st July, 1833.)

Second Regiment of Artillery.

Second Lieutenant John B. Grayson, to be First Lieutenant, 30th April, 1834, vice Fowler, deceased.

Brevet Second Lieutenant Ward B. Burnett, to be Second Lieutenant, 1st April, 1834, vice Cocke, resigned, (brevet 1st July, 1832.)

Brevet Second Lieutenant Theophilus F. J. Wilkinson, to be Second Lieutenant, 30th April, 1334, vice Grayson, promoted, (brevet 1st July, 1832.)

Second Regiment of Infantry.

Brevet Second Lieutenant Elbridge G. Eastman, to be Second Lieutenant, 4th March, 1833, vice Simonton, appointed First Lieutenant of the Regiment of Dragoons, (brevet 1st July, 1831.)

Third Regiment of Infantry.

Second Lieutenant Edwin B. Babbitt, to be First Lieutenant, 31st March, 1834, vice Archer, resigned.

Brevet Second Lieutenant William O. Kello, to be Second Lieutenant, 11th January, 1834, vice Cobb, deceased, (brevet 1st July, 1832.)

Brevet Second Lieutenant Henry Swartwout, to be Second Lieutenant, 31st March, 1834, vice Babbitt, promoted, (brevet 1st July, 1832.)

Fourth Regiment of Infantry.

Brevet Second Lieutenant Frederick Wilkinson, to be Second Lieut., 18th February, 1834, vice Ritner, deceased, (brevet 1st July, 1831.)

Brevet Second Lieutenant William W. S. Bliss, to be Second Lieut., 31st March, 1834, vice McKean, resigned, (brevet 1st July, 1833.)

Sixth Regiment of Infantry.

Brevet Second Lieutenant James S. Williams, to be Second Lieutenant, 31st May, 1824, vice Johnston, resigned, (brevet 1st July, 1831.)

Seventh Regiment of Infantry.

First Lieutenant Francis Lee, to be Captain, 31st May, 1834, vice Bonneville, dropped.

Second Lieutenant Gabriel J. Rains, to be First Lieutenant, 28th January, 1834, vice Williams, appointed Assistant Topographical Engineer.

Second Lieutenant Stephen W. Moore, to be First Lieutenant, 31st May, 1834, vice Lee, promoted.

Brevet Second Lieutenant Roger S. Dix, to be Second Lieutenant, 28th January, 1834, vice Rains, promoted, (brevet 1st July, 1832.)

Brevet Second Lieutenant Richard C. Gattin, to be Second Lieutenant, 31s May, 1834, Vice Moore promoted, (brevet 1st July, 1832.)

2—*Promotions by Brevet, conferred for ten years' service in one grade; or for faithful and meritorious service.*

Brigadier Generals by Brevet.

Colonel Duncan L. Clinch, 4th Regiment of Infantry, to take rank the 20th April, 1829.

Colonel Matthew Arbuckle, 7th Regiment of Infantry, to take rank 16th March, 1830.

Colonel James House, 1st Regiment of Artillery, to take rank 8th May, 1832.

Colonel Roger Jones, Adjutant General, to take rank 7th June, 1832.

Bvt. Colonel Abram Eustis, 4th Regiment of Artillery, 30th June, 1834.

Colonel Nathan Towson, Paymaster-General, 30th June, 1834.

Colonels by Brevet.

Col. Zach. Taylor, 1st Regiment of Infantry, to take rank 20th April, 1829.

Lt. Col. James B. Many, 7th Regiment of Infantry, to take rank 1st June, 1831.

Lieutenant Colonels by Brevet.

Major Henry Stanton, Quarter Master, to take rank 13th May, 1830.

Major R. E. DeRussey, Corps of Engineers, for faithful service and meritorious conduct,—30th June, 1834.

Bvt. Major Henry Whiting, 1st Regiment of Artillery, for faithful and meritorious services;—30th June, 1834.

Majors by Brevet.

Maj. Trueman Cross, Q. M. and Capt. 7th Reg't. of Inf'ry, to take rank 16th June, 1828.

Captain Thomas F. Hunt, 5th Regiment of Infantry, to take rank 16th June, 1828.

Captain Waddy V. Cobbs, 2d Regiment of Infantry, to take rank 31st March, 1829.

Captain Gustavus Loomis, 1st Regiment of Infantry, to take rank 7th April, 1829.

Captain Henry Wilson, 4th Regiment of Artillery, to take rank 20th April, 1829.

Captain Thomas F. Smith, 1st Regiment of Infantry, to take rank 25th April, 1829.

Captain Richard M. Sands, 4th Regiment of Infantry, to take rank 30th April, 1829.

Captain Wm. Hoffman, 2d Regiment of Infantry, to take rank 1st May, 1829.

Major R. B. Mason, Regiment of Dragoons, to take rank 31st July, 1829.

Captain Joseph S. Nelson, 3d Regiment of Infantry, to take rank 13th August, 1829.

Captain Fabius Whiting, 1st Regiment of Artillery, to take rank 10th September, 1829.

Captain Greenleaf Dearborn, 2d Regiment of Infantry, to take rank 30th September, 1829.

Captain Felix Ansart, 3d Regiment of Artillery, to take rank 28th Nov. 1829.

Captain Thomas Stanford, 2d Regiment of Infantry, to take rank 1st March, 1830.

Captain Thos. C. Legate, 2d Regiment of Artillery, to take rank 13th May, 1830.

Captain John L. Smith, Corps of Engineers, to take rank 29th August, 1830.

Captain Joseph Plympton, 5th Regiment of Infantry, to take rank 1st June, 1831.

Captain Wm. G. Belknap, 5th Regiment of Infantry, to take rank 1st Feb. 1832.

Captain De Lafayette Wilcox, 5th Regiment of Infantry, to take rank 1st April, 1832.

Captain Levi Whiting, 4th Regiment of Artillery, to take rank 21st May, 1832.

Captain Isaac Clark, 6th Regiment of Infantry, to take rank 27th August, 1832.

Captain Æneas Mackay, 3d Regiment of Artillery, to take rank 31st December, 1832.

Captain Benj. A. Boynton, 2nd Regiment of Infantry, to take rank 8th January, 1833.

Captain Owen Ransom, 2d Regiment of Infantry, to take rank 25th January, 1833.

Brevet Major William G. McNeil, Top. Engineer, to take rank 27th January, 1833.

Captain Wm. L. McClintock, 3d Regiment of Artillery, to take rank 11th August 1833.

Captain John L. Gardner, 4th Regiment of Artillery, to take rank 1st November, 1833.

Captain Henry Saunders, 1st Regiment of Artillery, to take rank 4th November, 1833.

Captain N. Baden, 2d Regiment of Artillery, to take rank 1st April, 1834.

Captain William W. Lear, 4th Regiment of Infantry, to take rank 1st May, 1834.

Captain Nathaniel Clark, 5th Regiment of Infantry, to take rank 29th June, 1834.

Captain George Blaney, Corps of Engineers, to take rank 30th June, 1834.

Captains by Brevet.

Captain Jac. Schmuck, 4th Regiment of Artillery, to take rank 25th July, 1824.

Captain Richard Bache, of Ordnance, to take rank 15th June, 1827.

First Lieut. Thos. J. Leslie, Corps of Engineers, to take rank 31st March, 1829.

Captain Seth Johnson, 2d Regiment of Infantry, to take rank 1st May, 1829.

First Lieut. Henry S. Mallory, 2d Regiment of Artillery, to take rank 31st May, 1829.

Captain Wm. M. Graham, 4th Regiment of Infantry, to take rank 11th August, 1829.

First Lieut. Wm. Wells, 2d Regiment of Artillery, to take rank 28th August, 1829.

Bvt. Captain James D. Graham, Assistant Top. Engineer, to take rank 8th Sept., 1829.

First Lieut. John R. Vinton, 3d Regiment of Artillery, to take rank 30th Sept., 1829.

First Lieut. Richard B. Lee, 3d Regiment of Artillery, to take rank 31st Oct., 1829.

Captain John Clitz, 2d Regiment of Infantry, to take rank 31st Dec., 1829.

Captain S. Shannon, 1st Regiment of Infantry, to take rank 23d Feb., 1830.

Captain John Symington, of Ordnance, to take rank 17th May, 1830.

Captain J. M. Washington, 4th Regiment of Artillery, to take rank 23d May, 1830.

Captain Andrew Talcott, Corps of Engineers, to take rank 1st October, 1830.

Captain H. H. Loring, 3d Regiment of Infantry, to take rank 17th October, 1830.

Captain E. K. Barnum, 2d Regiment of Infantry, to take rank 31st December, 1830.

First Lieut. Samuel Cooper, 4th Regiment of Artillery, to take rank 6th July, 1831.

First Lieut. Harvey Brown, 4th Regiment of Artillery, to take rank 23d Aug., 1831.

First Lieut. Saml. Ringgold, 3d Regiment of Artillery, to take rank 8th May, 1832.

First Lieut. Charles Ward, 4th Regiment of Artillery, to take rank 20th July, 1832.

First Lieut. John Bradley, 2d Regiment of Infantry, to take rank 2d October, 1832.

First Lieut. W. S. Newton, 3d Regiment of Artillery, to take rank 31st Dec., 1832.

First Lieut. H. A. Thompson, 4th Regiment of Artillery, to take rank 31st Dec., 1832,

Captain Giles Porter, 1st Reg't of Artillery, to take rank 1st February, 1833.

First Lieut. A. W. Thornton, 4th Reg't of Infantry, to take rank 25th April, 1833.

Captain Joshua Howard, 1st Reg't Artillery, to take rank 1st Nov., 1833.

First Lieut. David Van Ness, 1st Reg't of Artillery, to take rank 4th Nov., 1833.

First Lieut. Justin Dimick, 1st Regiment of Artillery, to take rank 1st May, 1834.

First Lieutenant, C. A. Ogden, to take rank 30th June, 1834.

First Lieutenants by Brevet.

First Lieut. Wm. C. De Hart, 2d Reg't of Artillery, to take rank 1st July, 1830.

First Lieut. James A. Chambers, 2d Reg't of Artillery, to take rank 1st July, 1830.

First Lieut. Julius A. de Lagnel, 2d Reg't of Artillery, to take rank 1st July, 1831.

II—Appointments.

STAFF.

John S. Lytle, Ohio, to be Paymaster, 27th February, 1834.

John B. Wells, Maryland, to be Assistant Surgeon, 1st February, 1834.

John M. Cuyler, Georgia, to be Assistant Surgeon, 1st April, 1834.

Madison Mills, New York, to be Assistant Surgeon, 1st April.

William Hammond, Maryland, to be Assistant Surgeon, 1st June, 1834.

Topographical Engineers.

Brevet Captain William G. M'Neil, Assistant Topographical Engineer, to be Topographical Engineer, with the brevet rank of Major, to rank from the 28th January, 1834, vice Perrault, deceased.

First Lieutenant William G. Williams, late of the 7th Regiment of Infantry, to be Assistant Topographical Engineer, with the brevet rank of Captain, to rank from the 28th of January, 1834, vice M'Neil, promoted.

Military Academy.

Robert W. Weir, New York, to be Teacher of Drawing at the Military Academy, 7th May, 1834.

Regiment of Dragoons.

Second Lieutenant Isaac P. Simonton, of the 2d Resiment of Infantry, to be First Lieutenant of Dragoons, 4th March, 1833, vice Moore, of the 7th Intry, declined.

Second Lieutenant Albert M. Lea, of the 7th Regiment of Infantry, to be 2d Lieut. of Dragoons, 4th March, 1833, vice Holmes of the 7th Infantry, declined.

3. The following named Cadets, constituting the First Class of 1834, having been adjudged by the Academic Staff at the June examination, competent to perform duty in the Army, the President of the United States has attached them as supernumerary Second Lieutenants, by brevet, to Regiments and Corps respectively, as candidates for commissions therein.

Corps of Engineers.

RANK.

1. Cadet Wm. Smith, of New York, to be brevet Second Lieutenant, 1st July, 1834

2. Cadet John Sanders, of Florida, to be brevet Second Lieutenant, 1st July, 1834.

Regiment of Dragoons.

21. Cadet Henry S. Turner, of Virginia, to be brevet Second Lieutenant, 1st July, 1834.

First Regiment of Artillery.

4. Cadet Thos. A. Morris, of Indiana, to be brevet Second Lieutenant, 1st July, 1834.

5. Cadet Robert Allen, of Maryland, to be brevet Second Lieutenant, 1st July, 1834.

7, Cadet Epaphras Kibby, of Ohio, to be brevet Second Lieutenant, 1st July, 1834.

8. Cadet John F. Lee, of Virginia, to be brevet Second Lieutenant, 1st July, 1834.

12. Cadet C. B. Chalmers, of D. Columbia, to be brevet Second Lieutenant, 1st July, 1834.

16. Cadet L. A. B. Walbach, of United States, to be brevet Second Lieutenant, 1st July, 1834.

Second Regiment of Artillery.

3. Cadet Harrison Loughborough, of Kentucky, to be brevet Second Lieutenant, 1st July, 1834.

6. Cadet James Duncan, of New York, to be brevet Second Lieutenant, 1st July, 1934.

8. Cadet Wm. T. Stockton, of Pennsylvania, to be brevet Second Lieutenant, 1st July, 1834.

11. Cadet Curran Pope, of Kentucky, to be brevet Second Lieutenant, 1st July, 1834.

13. Cadet John E. Henderson, of Tennessee, to be brevet Second Lieutenant, 1st July, 1834.

Third Regiment of Artillery,

10. Cadet Charles A. Fuller, of Massachusetts, to be brevet Second Lieutenant, 1st July, 1834.

14. Cadet Morris S. Miller, of New York, to be brevet Second Lieutenant, 1st July, 1834.

Fourth Regiment of Artillery.

15. Cadet Wm .G. Freeman, of Virginia, to be brevet Second Lieutenant, 1st July, 1834.

First Regiment of Infantry.

35. Cadet Wm. H. Price, of Pennsylvania, to be brevet Second Lieut. 1st July, 1834.

Second Regiment of Infantry.

30. Cadet Richard S. Smith, of Penn. to be brevet Second Lieut. 1st July, 1834.

Third Regiment of Infantry.

17. Cadet James F. Cooper, of Penn. to be brevet Second Lieut. 1st July, 1834.

19. Cadet George P. Field, of New York, to be brevet Second Lieut. 1st July, 1834.

20. Cadet Cary H. Fty, of Kentucky, to be brevet Second Lieut. 1st July, 1834.

23. Cadet Thomas O. Barnwell, of S. Carolina, to be brevet Second Lieut. 1st July, 1834.

26. Cadet Joseph L. Coburn, of Vermont, to be brevet Second Lieut. 1st July, 1834.

28. Cadet Philip N. Barbour, of Kentucky, to be brevet Second Lieut. 1st July, 1834.

Fourth Regiment of Infantry.

31. Cadet Eustace Robinson, of Virginia, to be brevet Second Lieut, 1st July, 1834.

34. Cadet John Graham, of New York, to be brevet Second Lieut. 1st July, 1834.

Fifth Regiment of Infantry.

25. Cadet Goode Bryan, of Georgia, to be brevet Second Lieut. 1st July, 1834.

Sixth Regiment of Infantry.

32. Cadet Wm. S. Ketchum, of U. States, to be brevet Second Lieut. 1st July, 1834.

Seventh Regiment of Infantry.

18. Cadet Gabriel R. Paul, of Missouri, to be brevet Second Lieut. 1st July, 1834.

22. Cadet Seneca G. Simmons, of Vermont, to be brevet Second Lieut. 1st July, 1834.

24. Cadet Henry McKavett, of New York, to be brevet Secoud Lieut. 1st July, 1834.

27. Cadet James G. Reed, of Pennsylvania, to be brevet Second Lieut. 1st July, 1834.

29. Cadet Arnold Harris. of New York, to be brevet Second Lieut. 1st July, 1834.

33. Cadet Forbes Britton, of Virginia, to be brevet Second Lieut. 1st July, 1834.

36. Cadet Alex. Montgomery, of Penn. to be brevet Second Lieut. 1st July, 1834.

III.—Casualties.

Resignations.—First Lieutenants.

Daniel Tyler, 1st Artillery, 31st May, 1834.

John Archer, 3d Infantry, 31st March, 1834.

Second Lieutenants.

James Clyman, Dragoon, 31st May, 1834.

Thomas J. McKean, 4th Infantry, 31st March, 1834.

Albert S. Johnston, 6th Infantry, 31st March, 1834.

Henry Du Pont, (brevet) 4th Artillery, 15th June, 1834.

Asher Philips, 17th January, 1834—Pay Master.

Lucius Abbott, 31st March, 1834—Assistant Surgeon.

Richard Wayne, 31st January, 1834, do. do.

Charles W. Handy, 31st May, 1834, do. do.

C. R. Leslie, 15th April, 1834, Teacher of Drawing, M. A.

Declined.

First Lieutenant Stephen W. Moore, of the Regiment of Dragoons.

Second Lieutenant Theoph. H. Holmes, of the Regiment of Dragoons.

Deaths.

Brevet Major P. H. Perrault, Topographical Engineer, 28th January, 1834.

Captain Matthew A. Patrick, 1st Artillery, 6th March, 1834.

First Lieutenant Abraham C. Fowler, 2d Artillery, 30th April, 1834.

Second Lieutenant William Bradford, Dragoons, 17th March, 1834.

Second Lieutenant Samuel K. Cobbs, 3d Infantry, 11th January, 1834.

Second Lieutenant Joseph Ritner, 4th Infantry, 18th February, 1834.

Dropped.

Captain B. L. E. Bonneville, 7th Infantry, 31st May, 1834.

4. The officers *promoted* and *appointed*, will report accordingly, and join their proper stations and companies without delay; those on detached service, or acting under special orders and instructions, will report by letter to their respective Colonels;

5. The Brevet Second Lieutenants will *join* their respective Regiments, and report in person for duty, agreeably to Regulations, by the *15th day of October:* and immediately, by letter, to their respective Colonels, who will assign them to companies.

By order of Alexander Macomb,
Major-General Commanding in Chief.
R. Jones, Adj. Gen.

Memoranda.

Army Register.—Correction and alteration of dates.

First Lieut. Timothy Paige, 4th Infantry, to rank from 4th March, 1833, vice Trenor, appointed Captain of Dragoons.

Second Lieutenant Bradford R. Alden, 4th Infantry, to rank from 15th September, 1833, vice Harford resigned.

Second Lieutenant Daniel P. Whiting 7th Infantry, to rank from 15th December, 1833, vice Carter, promoted.

Second Lieutenant Roger S. Dix. 7th Infantry, to rank from 28th January, 1834, vice Kanes, promoted.

In the caption, at page 4, in the place of "Former Commissions," substitute the words—*Brevets and former Commissions.* Roger Jones.
Adjutant General.

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 20, 1834.

CAUTION.

☞ GEORGE S. KINSMAN was, in October last, entrusted with the accounts due for this paper and for the Railroad Journal in the States *south* and *west* of Pennsylvania. He made collections at various places on his way to New Orleans, as we have since learned from subscribers, of which he has made no returns, and the subscribers have not, therefore, credit on our books for the amount. As nothing has been heard from *Kinsman* since last winter, on his arrival in New Orleans, it is feared that some accident may have befallen him, and his papers have fallen into other hands. This is to caution subscribers not to pay to *him*, or to any person in his name, accounts due this office after this date, and to request any person who may know his present residence, or any thing of him within the last four or five months, to communicate the same to the subscriber without delay. *New York, July 21st*, 1834.

D. K. MINOR.

☞ Messrs. E. & B. G. EASTON, of Cincinnati, Ohio, are authorized to collect the accounts due for the New York American, the Railroad Journal, and Mechanics' Magazine, in Ohio, Kentucky Tennessee and Indiana.

PUBLIC DOCUMENTS, SPEECHES, PROCEEDINGS AND REPORTS OF THE LAST SESSION OF CONGRESS. This day published and for sale at 35 Wall street — This book contains the MESSAGES and PROTESTS of the President, *Reports* of the Heads of Departments, with the most important Speeches and Proceedings of the Session, including the lengthy Debates upon the DEPOSITE QUESTION, the PROTEST and the POST-OFFICE REPORT. It contains 820 large octavo pages.

A small edition only printed. jy21 tf

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for shins. The nail is hammered and comes from the machine completely headed to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 229 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

J23 1am H. BURDEN.

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better tustice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*; either or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany*.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, } *Flat Bars* in
200 do. 1½ do. ¼ do. } lengths of 14 to 18
40 do. 1½ do. ¼ do. } feet counter sunk
800 do. 2 do. ¼ do. } holes, ends cut at
800 do. 2½ do. ¼ do. } an angle of 45 degrees with splicing plates, nails
soon expected. } to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2¼, 2⅝, 2¾, 3, 3¼, 3½, and 3⅝ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

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ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norriet. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J 15 tf

RAILROAD CAR WHEELS, BOXES AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m19

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 52 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Hearte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

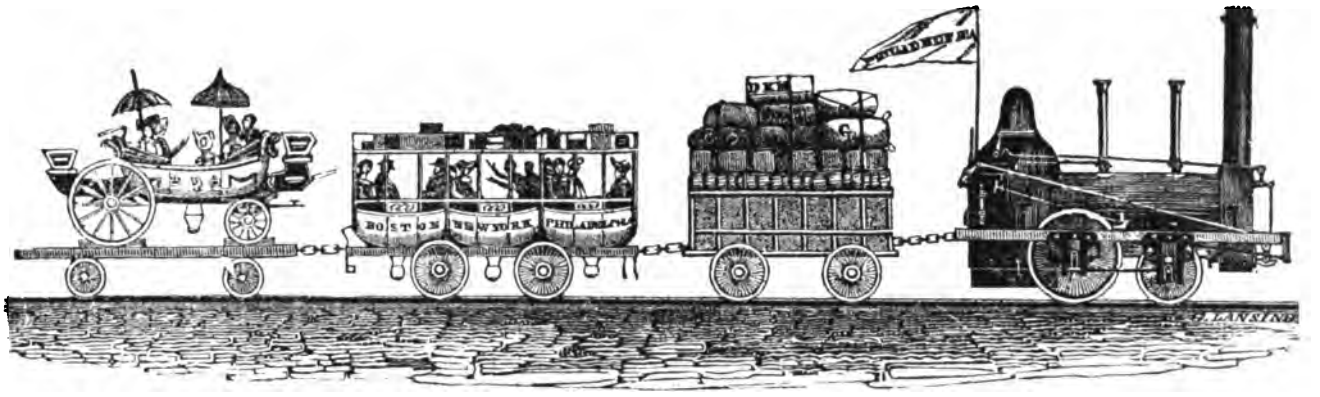
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st. 1833

To Messrs Ewin and Hearte—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, AUGUST 2, 1834. [VOLUME III.—No. 30.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, AUGUST 2, 1834.

By a reference to the extract from the National Gazette, inserted on page 469, it will be seen that we have but partially understood the advantages of Railroads, or power of locomotive engines. Only think of a single engine moving over 600 passengers at the rate of 15 miles an hour! and that, too, when the application of steam to railroads is in its infancy. A greater freight will be carried at 25 miles per hour.

LIST OF RAILROADS IN THE UNITED STATES.

(Continued from page 453.)

New-York and Erie Railroad.—This road was chartered in 1832, with a capital of 10,000,000 dollars. The charter fixes two points, New-York and Binghamton, and requires it to pass entirely within the state of New-York. Some efforts were made during last season to effect a survey; it was not, however, commenced until the present summer. Judge Wright is now engaged with an efficient force in making the preliminary surveys provided for by a law of the last session of the legislature, and it is understood that the route, as far as examined, is even more favorable than was anticipated. It is believed that the entire route, about 400 miles, may be accomplished with only — stationary engines, and that much the greatest part of the road will be found highly favorable for the use of locomotive engines.

The route not having been defined, the delineation on the map is of course merely conjectural.

Mohawk and Hudson Railroad.—This was the first railroad chartered in the state of New-York. It was commenced in 1830, when there was of course very little information upon the subject of railroads in the country, and it therefore progressed slowly in its earliest stages. It has cost the company a large amount of money. The plan and profile are admirably designed, and justify the great expense which the heavy embankments and excavations have required. $483,215 46 have been, and $156,693 will be, expended in completing the work, according to the official report made to the Legislature of New-York in January, 1832. This includes the cost of the second track. It is proper to state that about $100,000 of the above sum should be deducted for land, (13 acres are owned in Albany alone,) depots, engines, waggons, &c.

The road commences on the bank of the Erie Canal, at Schenectady, and runs parallel to it for 20 chains—then a curve of 10 chains.

	Miles.	Chains.	Grade.	Inclination.
From Schenectady to foot of inclined plane	0	32	level	
nclined plane	0	31	rise	1 in 18
Then runs	3	44	level	
" "	2	10	descent	1 in 450
" "	1	40	level	
" "	2	53	descent	1 in 225
" "	1	7	level	
" "	3	11	descent	1 in 270
" "	0	2	level to head of pl.	
Then Albany plane	0	47	descent	1 in 18
Then to dock head on the Hudson at Albany	0	32	descent	1 in 500
[Total	15	69		

When excavation occurs in the grading, the width for a double road is 38 feet; when embankment occurs, the width on the level of the road is 26 feet.

The greatest height of embankment is 44 feet; and the deepest excavation is 47 feet.

On the first grade, at Schenectady, below the inclined plane, there is one curve, about 10 chains in length, on a radius of 700 feet. There is a curve at the head of each inclined plane, about 8 chains each, on a radius of 1100 feet: between these two there are two other curves, one on a radius of 4,200 feet, 9 chains long—and one on a radius of 23,000 feet, 6 chains long. The only othe curve is between the foot of the Albany plane and the river, on a radius of 4,000 feet.

The wooden cross sleepers are 7 inches in diameter, and 8 feet long.

Stone blocks contain each 2 cubic feet, and cost 45 cents. They are laid 3 feet apart, from centre to centre, on a foundation of broken stone, well rammed.

The iron rail plate is a bar 9-16 by 2 1-2 inches, with the upper curves rounded to 1 7-8 inches width. The timber rails are yellow or Norway pine, 6 by 6 inches. The width between the tracks is 4 feet 9 inches."

The summit is 335 feet above the Hudson. The cost of the railway has been incurred for broken stone.

There are two stationary engines, one near each end of the road. Locomotive engines are mostly in use, although horses are occasionally used. The main line of the road approaches the Hudson below the city, where the company ha warehouses for freight. There is also a branch road into State street to the depot, and also to the basin. It is, however, used only for passengers. This road has cost about $40,000 per mile, yet it will be a good investment for those who *hold* the stock.

(See next page.)

ERRATUM.

In the last number of the Railroad Journal, page 453, in the account of the Tuscumbia Railroad, for "about 30," read "45 2-5 miles,"

Long Island Railroad.—The Commissioners of the Railroad lately had a meeting, at which a resolution was passed, that books of subscription to the stock should be opened on the 1st Dec. next. The subscriptions were deferred to that time with a view that certain surveys of the route might be made in the interim. A committee was appointed to visit Boston, Providence, and Stonington, to ascertain what co-operation might be expected in effecting this new channel of intercourse between New York and Boston. We are only enabled to say, that, so far as enquiries and examinations have been made, the prospect is encouraging.—[L. I. Star.]

Ship Canals.—Are *ship* canals necessary to the prosperity and rapid developement of the resources of this country? If so, at what points are they likely to be most useful?

This question naturally leads to others: and first, where is the greatest body of fertile lands unoccupied? and secondly, what are its natural advantages for transportation?

To the first it may be answered, that section bounded on the north by Lakes Erie, Huron, and Superior; on the east, south, and west, by the rivers Ohio and Missouri. Within these limits is a territory which would in the old world be considered an *Empire*. In *fertility* and variety of climate it is not surpassed in the world. There is nothing necessary or convenient to the happiness of man, which may not be found or produced within those limits. Its resources are apparently inexhaustible; those resources are being rapidly developed, and it is therefore necessary that early measures should be taken to provide suitable outlets for its products. In reply to the second, it may be said that its natural advantages for that purpose are also not only equal, but superior to almost any other country. This may be also true; yet it does not follow that it has all, or even the *necessary* advantages, as the best of natural do not always equal artificial advantages. Taking things as we find them, New-York is the great centre of commerce of the United States. *To* it, and *from* it, flow all the great streams of business. Its location is such that this will long be the case, and therefore it is that her citizens should be upon the alert to open those great channels through which it must flow. It is, therefore, to the citizens of New-York that the question is put *Are ship canals necessary to the prosperity and rapid developement of the resources of this country?* The answer will be, I doubt not, THEY ARE; and it follows as of course, they are necessary to connect the Hud-

son, by the way of the Lakes, with the Mississippi! A ship or steamboat canal from the Hudson to Lake Ontario, from Lake Ontario around the Falls of Niagara to Lake Erie, and from Chicago, at the extremity of Lake Michigan, to the foot of the Illinois rapids, would open an uninterrupted (for most of the year) communication from New-York to New-Orleans of more than 3,500 miles; and this can all be accomplished by a cutting of *less than three hundred* miles, and for a sum less than 20,000,000 of dollars: an amount which New-York alone can raise without inconvenience, any time she chooses. An amount, however formidable it may appear, altogether insignificant, when compared with the increased value, its expenditure and the completion of the work would give to property within its influence. If the Erie and Champlain Canals cost *ten* millions, they have already produced an increase in the value of property of more than thirty millions over what it would have been had they never have been constructed; so the construction of ship canals through these sections would, in ten years, enhance the value of property in the United States at least from fifty to seventy millions of dollars.

LIST OF RAILROADS IN THE UNITED STATES.

(Continued from page 453.)

The following account of the route of the Georgia Railroad, in continuation of the Charleston and Augusta Railroad, will be read with much interest, as it points out almost the entire route of one of the most important roads in this country. We have been very desirous to see this road progress, as it will have a great tendency to bring the far south and south-west in more immediate contact with us, of the North, and us with them. Easy communication will make many friends, as well as fortunes, and the natural result will be a better understanding, and knowledge of the character of each other. It will then be ascertained that we of the north are not all "pedlars of wooden nutmegs and horn gunflints," and they of the south not all "negro-drivers, nor hard masters."

Athens,, July 10, 1834.

To the Editor of the Railroad Journal.

Sir,—As you request an account of the Georgia Railroad, I give it cheerfully, so far as the project has gone. And first, as to the route, I refer you to Tanner's Map of the United States. We begin at Augusta, go down the Savannah River to Butler's Creek, up the valley of that creek, and gradually ascend the ridge between the head waters of Bear Creek, on the left, and Little River on the right. We pass a little to the north of Warrenton, directly through Crawfordville, seven miles north of Greenesboro,' a little west of Lexington, and cross the Oconee river at Athens. After ascending out of the valley of Butler's Creek, there is a continuous ridge the whole way until we come opposite Athens. The valley of the Oconee is deep, but it can be overcome by an inclined plane and stationary power, at a moderate expense, or by a viaduct, which last mode seems to be preferred by Col. Long.

Referring to the same map, we propose to cross the Middle Oconee, with the route beyond Athens, near Clarksboro'. Thence there is another ridge, of remarkable evenness of outline, passing round the head waters of the Ocmulgee, a little north of Lawrenceville, to the Chattahoochee. Crossing that river we find another ridge, between the head waters of Tallapoosa on the south, and the Etowah on the north. We propose to cross the Coosa near the mouth of Will's Creek, perhaps higher up, and proceed, by a route yet to be ascertained, but practicable, by all accounts we have of the country, to connect with the Tuscumbia and Decatur railroad, (Ala.,) at the last mentioned place. From Tuscumbia to Memphis, the country is now under examination; and will, we are informed, present no serious obstacle to the construction of a railroad. Col. Long, of the United States Engineer Department, is now engaged, (July, 1834,) in examining the route between Athens and Decatur.

You have here a sketch of the route which it is proposed to pursue in connecting the Mississippi with Charleston. It differs from what you had supposed to be the route, from the circumstance that, in this region, we find it best to keep on the ridges, instead of pursuing the valleys of our streams.

The charter of the Georgia Railroad Company is a very liberal one. It gives us the exclusive right to an extent of 20 miles on each side of our road. But we have no fears of competition, even without this exclusive right; for nature has settled that question. We have two years to begin our work in, and six to finish it; and our charter runs for thirty-six years after the completion of the road, so far as respects the exclusive privilege—but the corporation is perpetual.

We are authorized to charge 50 cents per 100 lbs. for 100 miles freight; and 10 cents per cubic foot for articles of measurement the same distance; and 5 cents per mile for passengers.

The whole amount of stock is one million five hundred thousand dollars. Stockholders are entitled to a vote for every share they may hold; and the stock of the company is exempt from taxation; but seven years after the road is finished, the net profits *may* be taxed, not exceeding *one-half* of one per cent. per annum.

The distance from Augusta to Athens is, by the road now travelled, 96 miles. By the survey for the railroad, the distance is increased to 114 miles. The estimate is, that the road will cost, complete, about 10,000 dollars per mile. But many persons who are well acquainted with the facilities of the country through which the road will pass, think this estimate quite too large. Even at ten thousand dollars per mile, the investment must be a good one. Between fifty and seventy thousand bales of cotton must pass over the road annually; and the return freight will consist of the articles consumed by at least two hundred thousand people. Then add travelling, and the transportation of the mail; and to all this the amount of new business that always springs up where the facilities of transportation are increased. Our iron, marble, and limestone, of which we have an ample abundance of excellent quality, though now almost entirely useless as articles of export, and even of domestic consumption, will be called into requisition; and these will add something very considerable to the income of the road.

Our calculations are, that this road, even if it should go no further west than Athens, will receive a large share of business from East Tennessee. At present, they receive a great portion of their goods in that region by land from Baltimore, paying from five to eight cents per pound freight. By Charleston, Augusta, and Athens, they can receive the same goods at 3 1-2 cents per pound. They will not hesitate, therefore, we think, in their choice of routes.

But if this road has so good prospects, supposing it to stop at Athens, what must they be if it be pushed through to the valley of the Mississippi? In that event, we are confident that no stock in the world will be equal to it in the amount of its annual returns in the shape of profit.

Our charter provides for the construction of two branch roads, leaving the main road at the most advantageous point near Greenesboro,' and running, one to Eatonton, and the other to Madison, Morgan county. If, on due examination, it be found practicable to construct these roads, a very large proportion of the whole cotton crop of Georgia must pass over the Georgia Railroad.

The people of Savannah, with praiseworthy enterprise, propose to construct a railroad from that city to Macon. We believe it is the true interest of the people of that city to direct their attention to a connection with the Georgia Railroad at Augusta. The trade, which would otherwise go to Charleston, may be thus intercepted for the benefit of Savannah; and the people of the interior, when they reach Augusta, having a choice of markets, can go either to Savannah or to Charleston, as may best suit their interest.

Jas. Camak,
President Georgia Railroad Company.

Savannah and Augusta Railroad.—A railroad is in contemplation between Savannah and Augusta, Georgia, with a view of securing a share of the business of the state. It is indeed highly essential for Savannah to make an effort of this kind, or she will lose almost the entire trade of the up country. With this road she may share with Charleston the business.

North Carolina or Central Railroad, commences at Newbern, and will probably follow the course of the Neuse River to Raleigh, and from thence across the country to or near Clinton, on the Yadkin, and thence to or near Statesville, Morganton and Ashville, and thence down the valley of the French Broad River to Knoxville, Tenn. This is a work of magnitude, and of great consequence to the prosperity of North Carolina, and it is much to be desired that it should be prosecuted with vigor. The present prospects of the road are flattering. A convention was held at Raleigh on the 4th of July, 1833, at which 118 delegates attended, and over which his excellency Governor Swan presided. Great unanimity of sentiment prevailed, and it is to be desired that the work may be undertaken in a proper spirit, and then prosecuted with vigor. There is no Atlantic state in the Union, perhaps, which will be more benefitted by such a work than North Carolina.

Cape Fear and Yadkin Railroad.—This road commences at Wilmington on the navigable waters of Cape Fear River, and follows the direction of that river to Fayetteville, and from thence probably to Clinton, on the Yadkin River, in the county of Davidson, at which place it unites, or it is to be hoped it will unite, with the Central Railroad from Newbern through Raleigh. From this point, should the road be continued further, as it *undoubtedly* will, if the citizens of North Carolina duly appreciate their location, the natural advantages they enjoy, and their mineral wealth, it will probably pass through Morganton, in Burke, to Ashville, in Buncomb county, and from thence it will follow the French Broad river, to Knoxville, in Tennessee, where it will connect with the great road through the valley of Virginia to Richmond and Baltimore, and New-York, and Boston. North Carolina has much at stake in the prosecution of this work. She must make it in self-defence, if for no other reason. With the railroads of South Carolina and Georgia on the south, and Virginia and Maryland on the north, she will be lost in her own nothingness, unless she steps in and intercepts a share of the business which must pass to the Atlantic; and with her *Central*, and *Cape Fear* and *Yadkin* railroads, united at Clinton and extended to Knoxville, she may successfully compete with her neighbors: without them, she is lost. This road was commenced at Fayetteville on the 15th June.

Roanoke, Raleigh, and Fayetteville Railroad.—This road is to be a continuation of the Petersburg, or rather the great north and south railroad through the Atlantic States to the Mississippi.

South Carolina, or Charleston and Hamburgh Railroad.—The city of Charleston, or some of her enterprising citizens, are entitled to great credit for the construction of this work. It was the first work of the kind commenced in the southern states. As early as February, 1828, measures were taken to ascertain what would probably be the effects of such a work upon the general interests of Charleston. The result was an application for, and the granting of, a charter. The work was commenced in the winter of 1829 and '30, and has been continued with great perseverance, until its final completion in Sept. last, since when it has been in successful operation. The manner of constructing this road, of wood on piles, and in many cases on *trestle work*, does not please every one, but it was probably the only mode, a cheap one, which could at the time have been adopted. Its length is 135 miles, the longest railroad ever constructed. It rises 510 feet from Charleston, and then from this point, 16 miles from Hamburgh, descends 360 feet to Augusta Bridge. There is an inclined plane of 3800 feet in length, and a descent of 180 feet. It has three grades of descent, the steepest of which is one in thirteen. From the foot of the plane, the remainder of the descent is overcome in 10 miles with an average inclination of 18 feet per mile. The road is a single track, with necessary turnouts, except at the inclined plane, where there is one mile of double track. At the inclined plane there is a stationary power of two twenty-five horse power engines working on one crank. Locomotive power is used on the road. It has cost, including motive power, cars, and every thing complete, ready for use, $904,499, or $6,625 92 per mile. This road will be continued, or rather the Georgia Railroad will connect with this, and pass through Athens, and thence westward, and connect with the Tuscumbia and Decatur, and the Tennessee Railroad, to the Mississippi River, thus forming one of the most important works in the Union.

The route from Charleston to Hamburgh, 135 miles, is performed in less than twelve hours with great ease, and *will* be done in eight hours.

Cheraw, Camden, and Columbia Railroad.—This road will probably be constructed within a few years as a connection between the great Atlantic Railroad, from the north, and the road from Augusta through Georgia and Alabama, to the Mississippi. It will probably intersect the Charleston and Hamburgh road at some point about one hundred miles from Charleston, and 35 miles from Hamburgh.

Lexington and Ohio Railroad.—This road, commencing at Lexington, passes through Frankfort and terminates at Louisville, Ky. It will be, when completed, 90 miles in length. That part between Lexington and Frankfort, 28 miles, has been completed at

an expense, including machinery, of $400,000, and is now in use. The construction of this road is said to be equal to any, and superior to most other railroads in this country; it has no curve with a less radius than 1000 feet. The remaining 61 miles of the road will probably be completed for $500,000, or about $8200 per mile. Should it be completed in the same permanent manner with that now in use, it will do credit to the State, and to those who have had the superintendence of it. At present horse power only is used.

COLUMBIA AND NASHVILLE RAILROAD.—The same enterprise which projected the railroads already mentioned will soon extend them to other parts of the State, and amongst the first, as has been suggested, will probably be one from Columbia to Nashville, the capital of the State; and it has been also intimated that it was in contemplation to extend it to Louisville, Kentucky; thereby opening a choice of routes, either to New-Orleans, New York, via the Lakes, or via Charleston, S. C.

COLUMBIA AND TENNESSEE RIVER RAILROAD.—The route for this road has been surveyed, and the estimates of its cost made. (See Railroad Journal, vol. 3, p. 338.) It commences at Columbia, and passes in a south-westerly direction, crossing the Big and Little Buffalo rivers, to, or near Waynesboro', and thence to a suitable point on the Tennessee river, between Ellis's Ferry, and Roche's Farm, from whence it will probably be continued to Bolivar, or Jackson, and thence to the Mississippi river at Memphis, or near Covington. The distance from Columbia to the Tennessee is about 50 miles, and its estimated cost, on the plan of the Charleston and Hamburgh railroad, is about $360,000. Five routes have been surveyed, varying from 57 to 65 miles, and from $374,970, to $441,450.

MEMPHIS AND BOLIVAR, (TEN.) RAILROAD.—This railroad will be the final link in the grand Atlantic Railroad. It has been surveyed, and it is much to be hoped that its construction will be commenced without unnecessary delay. Let this be commenced, and the intermediate sections between Bolivar and Tuscumbia; and Decatur and Athens, Georgia, will speedily follow. It is designed also to connect this road with another, via Waynesboro', to COLUMBIA and NASHVILLE, and finally to continue it to LOUISVILLE, Kentucky.

MAD RIVER RAILROAD.—This road is designed to extend from Dayton, the present termination of the Miami canal, to Sandusky, on Lake Erie. It will pass through a very fertile section of the State, and open a direct and convenient communication from the Lake to Cincinnati and the lower Ohio. It will be, when completed, 153 miles in length. It passes in its route the villages of Springfield, Urbana, Bellefontain, Upper Sandusky, and Tiffin.

It is estimated to cost $11,000 per mile. The route is said to be remarkably adapted to the use of locomotive power, as there is not an elevation on the line which would require the aid either of animal or stationary power. It will probably be made in a few years.

The other chartered railroads in Ohio are the following, some of which will probably be completed, whilst others will be railroads on the statute-books only. We have received no intimation that either of them has been, or is likely to be made immediately.

THE ERIE AND OHIO RAILROAD will pass from the Lake, at Ashtabula, or Fairport, through Warren, to Wellsville, on the Ohio river, a distance of about ninety miles, and perhaps the shortest route by which the two can be connected.

THE PENNSYLVANIA AND OHIO RAILROAD is designed to open an easy communication from the Ohio Canal at Massillon with Pittsburg, passing through the valley of the Little Beaver river to the Ohio; by which it is hoped to divert to Philadelphia much of the trade which would otherwise go to New-York.

THE CHILLICOTHE AND LEBANON RAILROAD will open a communication from Chillicothe through Hillsborough, Wilmington, and Lebanon, probably to the Miami canal.

THE RICHMOND, EASTON, AND MIAMI RAILROAD is, we believe, to commence at Dayton, at the head of the Miami Canal, and pass through Eaton, in Preble county, to Richmond, in Indiana.

THE CINCINNATI, HARRISON, AND INDIANAPOLIS RAILROAD will open an easy communication from Cincinnati through Harrison and Brookville, in Indiana, to the seat of government in that state, there to connect with the Madison, Indianapolis, and Lafayette railroad, incorporated by the Legislature of Indiana.

THE FRANKLIN, SPRINGBOROUGH, AND WILMINGTON RAILROAD is nearly a parallel road to the Chillicothe and Lebanon railroad; which we should suppose would be made to intersect at Lebanon, and thereby ensure the construction of one *good* one, rather than defeat the whole.

THE MILAN AND NEWARK RAILROAD is designed to open a direct communication from the Ohio Canal at Newark, in Licking county, with Lake Erie, passing through Knox, Richmond, and Huron counties—probably to the mouth of Huron river. This road will pass through a beautiful section of country, and will run nearly parallel to and not far from the Milan and Columbus railroad, as we infer from the *title*—from which indeed we have traced the course of most of these roads, not having received the different acts by which they are chartered.

The last mentioned road, from Columbus to Milan, and the Columbus, Delaware, Marion, and Sandusky Railroad, will pass through that section of country included between the railroad from Newark to Lake Erie and the Mad river railroad, passing through Urbana, in Champaign county, to Sandusky; which can in no place exceed seventy miles in breadth.

INDIANA RAILROAD.—This road is to commence at Madison, on the Ohio River, and pass through Indianapolis to La Fayette, on the Wabash River, a little below the termination of the Wabash and Miami Canal, and from La Fayette it is to be continued nued to the Lake, at Michigan. This road, when completed, will afford an easy mode of communication between the Lakes and the Ohio. The company has ten years to complete the road to Indianapolis, and five years thereafter to complete it to La Fayette.

WEST FELICIANA AND WOODVILLE RAILROAD.—This road commences at St. Francisville, on the east bank of the Mississippi river, and extends in a northerly direction to Woodville, in Mississippi. Its length is 30 miles. It was to have been commenced in December, 1832, and to have been completed in 1833. Of its progress and present condition, no definite information has been received.

VICKSBURG AND CLINTON, (MISS.,) RAILROAD.—In March, 1832, a meeting was held at Hamburgh, Miss., for the purpose of taking measures to construct a railroad from Vicksburg to Clinton. Of the result of that meeting no information has been received.

JACKSON AND MISSISSIPPI RAILROAD.—This road is to commence at Jackson, and terminate at one of the following places, as may be most suitable on the Mississippi, viz., Randolph, Fulton, Coal Creek, or Ashport. Its length will vary little, according to the surveys, from 58 miles, and its cost, the road to be made similar to the South Carolina road, is estimated, including every convenience for business, and to be completed early in 1837, at $337,052,50, and its income, based upon the present business of the country, at $100,500, its expenses at $19,350, leaving a net income, per annum, of $81,150, to divide among the stockholders.

This road will probably be continued to Columbia, either by the way of Bolivar, or to intersect in a more direct course the Columbia road, at its crossing of the Tennessee. The Columbia road will also probably be connected with Tuscumbia, or Decatur, by the way of Pulaski, Elkton, and Athens. There appears to be a suitable spirit aroused in Tennessee upon this subject, and important results must follow. The vast resources of the State will be developed, and its mineral wealth will be enjoyed by those who now possess them, instead of being wholly reserved for succeeding generations.

NEW-ORLEANS AND PONTCHARTRAIN RAILROAD.—This road extends from the city of New-Orleans to Lake Pontchartrain, about 6 miles, and is designed as a link in the route to Mobile by steamboat. The road, machinery, real estate in the city and harbor on the lake, (which last, by the by, must have cost the largest proportion of the amount,) have cost $443,443 76. It has been in use for passengers since the spring of 1832, and from the 23d of April to 23d October of that year, $36,000 were received for passengers alone, which, after deducting expenses, gave a net income of $25,000. It will materially reduce the expense of transportation between Mobile and New-Orleans.

TALLAHASSEE, (FA..) AND ST. MARKS RAILROAD.—Something has been done towards a railroad from Tallahassee to some point on the St. Marks, or Wakulla river. 900 shares were subscribed, and application was to have been made at the last session for a charter.

LIST OF CANALS IN THE UNITED STATES.

MIDDLESEX CANAL, from Boston to Chelmsford, Mass.—This canal was constructed with a view of opening a communication with the Merrimac River, and of drawing the trade of that river to Boston. Its length is 30 miles, breadth at surface 30 feet, bottom 20, depth of water 3 feet, 136 feet fall, and 20 locks. Incorporated 1789; completed 1808, and cost $528,000.

BLACKSTONE CANAL, extends from Worcester, Mass. to Providence, Rhode-Island, 45 miles.

Most of the articles carried up this canal are articles for consumption and manufacture. Those carried down are mostly manufactured articles.

The descent from Worcester to Providence is 451 feet, overcome by 48 locks, 80 feet by 10; width of canal at surface is 34, bottom 18, and depth of water 4 feet; completed in 1828, and cost $600,000.

FARMINGTON CANAL, commences at New Haven, Ct. and when completed will connect with the Connecticut river, at Northampton, Mass. 65 miles. This canal is 38 feet wide and 4 deep.

The Farmington, like the Blackstone Canal, is not a profitable investment.

PAWTUCKET CANAL, in Lowell, for passing a fall of the same name, of 32 feet. It is 80 feet wide, 4 feet deep, and 2 1-2 miles in length.

SOUTH HADLEY CANAL, constructed to pass the falls in South Hadley, on the Connecticut River, is 2 miles in length, and has a lockage of 40 feet.

MONTAGUE CANAL, constructed to pass the falls of the same name in that town, is 3 miles long, 25 feet wide, and 3 feet deep—lockage, 75 feet.

ERIE CANAL, NEW-YORK.—Commenced July 4th, 1817. First navigated from Utica to Rome, fifteen miles, October 23, 1819. Tolls first received July 1, 1820. 280 miles of canal completed, and first boat entered the Hudson at Albany, from the north and west through the canal, October 8, 1823. Completed October, 1825. Length from Lake Erie to the Hudson river, 363 miles, viz.: Western section—Buffalo to Montezuma, on Seneca river, 157 miles, 21 locks, fall 186 feet; Middle do.—Montezuma to Utica, 96 miles, 11 locks, rise and fall 95 feet; Eastern do.—Utica to Albany, 110 miles, 52 locks, fall 417 feet. Total, 363 miles, 84 locks, rise and fall 698 feet.

Lake Erie is 565 feet above the Hudson river at Albany. The canal is 40 feet wide on the surface and 4 feet deep.

CHAMPLAIN CANAL.—Begun October, 1817; navigable November, 1819. This canal commences at the junction with the Erie Canal, nine miles north of Albany, and terminates at Whitehall, in the county of Washington, connecting the waters of the Erie canal and the Hudson river with Lake Champlain. It has a lateral cut connecting it with the Hudson river by three locks at Waterford, eleven miles north of Albany, as the Erie canal has connecting it with the same river at West Troy, by two locks.

Length from Lake Champlain, at Whitehall, to junction with Erie canal, nine miles above Albany, sixty-three miles. Number of locks, as follows: 7 locks rise from the lake to the summit level, 54 feet; 14 do. fall from the summit level to the Hudson, 134; Total, 21 locks, Rise and fall 188 feet.

OSWEGO CANAL.—Commenced, 1826; completed 1828. Length from Salina to Oswego, 38 miles; connecting Lake Ontario with the Erie canal. One half the distance is canal, and one half slack water, or river navigation, with a towing path on the bank. Fourteen locks, (13 of stone, and 1 of wood and stone.) Descent from Salina to Lake Ontario, 123 feet.

CAYUGA AND SENECA CANAL—commences at the Erie canal at Montezuma, Cayuga county, and terminates at Geneva, Ontario county, connecting the waters of the Erie canal with those of Seneca lake. This canal has also a lateral branch to East Cayuga village, on the Cayuga lake, thus connecting with the waters of that lake. It opens a lake navigation of more than 100 miles. Commenced 1827; completed 1829. Length twenty miles forty-four chains, from Geneva, on the Seneca lake, to Montezuma on the Erie canal. One half canal and one half slack water navigation. 2710 feet of tow-path bridges. Eleven wood locks. Descent 73 1-2 feet from Seneca lake to the Erie canal at Montezuma.

CHEMUNG CANAL—extends from the head waters of the Seneca lake to the Chemung (or Tioga) river, a branch of the Susquehannah, at the village of Elmira, Tioga county. Length 22 1-2 miles, with a navigable feeder from Painted Post, Stuben county, on the Chemung river, to the summit level, 13 1-2 miles, making

thirty-six miles of canal navigation. This canal thus forms part of a chain of communication from the Erie canal to the Susquehannah river. It has fifty-two wood locks, comprising 516 feet of lockage, and one guard lock, three aqueducts, five culverts, and seventy-six bridges. Distance from Elmira to Albany via this canal, Seneca lake, Cayuga and Seneca and Erie canals, 326 miles. Commenced 1830; completed 1833.

Crooked Lake Canal—extends from Penn Yan to Dresden, both in Yates county, connecting the waters of the Crooked and Seneca lakes, through a beautiful and fertile country. It is eight miles in length, and has 260 feet of lockage, which is overcome by twenty-seven wood locks. The other structures are one guard lock, twelve bridges, three culverts, and one waste weir. Commenced 1830; completed 1833.

Chenango Canal.—An act of the Legislature was passed, February, 1833, authorizing the construction of the Chenango canal, to extend from the Erie canal, in Oneida county, to the Susquehannah river at Binghamton, Broome county. Length about ninety-five miles. Route as follows: commencing at Whitesborough, or Utica, passing through the valleys of the Oriskany and Sauquoit creeks, and Chenango river, and by the towns and villages of New Hartford, Clinton, Madison, Hamilton, Sherburne, Norwich, Oxford, Greene, and Chenango Forkes, and terminating at Binghamton, where it unites with the Susquehannah river. Elevation from the Erie canal to the summit level, 706 feet; descent from thence to the Susquehannah river, 303 feet; total lockage, 1000 ft.

The estimated cost of this canal by Mr. Hutchinson, Civil Engineer, in 1828, was $944,775 36; but the Canal Commissioners, in their report of January, 1834, estimate the cost at $1,737,703 22.

During the season of 1833, surveys of different routes were made from Sherburne, a few miles south of the summit level, north to the Erie canal, and a preference given to the route terminating at Whitesborough. (The Legislature, at their session in 1834, decided to change it to Utica.) On this part of the canal there will be eighty-seven locks and four aqueducts; and it is proposed to construct the locks with wooden chambers, supported by a dry wall of stone masonry on the sides, excepting about eight feet below the upper gates. Some of the locks are to be of stone. The plan adopted for making this canal, and its different structures, will increase its aggregate cost beyond the sum for which a canal less substantial might have been constructed; but it is the opinion of the Canal Commissioners that it will prove the cheapest and most useful, requiring less expense for repairs. To supply the summit level with water, artificial reservoirs are to be constructed, and fed from ponds aud brooks.

Contracts for the thirty-eight miles between the Erie canal and the village of Sherburne, (excepting the reservoirs and feeders,) have been made, and the 15th of October, 1836, is the time stipulated for the completion of the work. Surveys have been made from Sherburne to Greene, Chenango county, and the present season the surveys from Greene to Binghamton will be completed. These sections will be placed under contract as soon as convenient after the completion of the surveys and estimates.

One million of dollars have been appropriated to the construction of this canal, and an additional million is recommended by the Commissioners in anticipation of contracts.

Contemplated Canals.

Genesee and Allegheny Canal.—Public attention has been frequently called to the subject of a canal proposed to be made from Rochester on the Erie canal, to Olean (or Hamilton) on the Allegheny river; and a bill was passed by the Legislature in 1834, directing a particular survey of the route, and estimate of the cost of construction. The route was superficially surveyed in 1825 by an engineer of the State, and in 1826 a report made to the Legislature by the Canal Commissioners. The canal is to commence at Rochester, following the valley of the Genesee river, through Monroe, Livingston, and Allegheny counties, until it reaches the Upper Genesee Falls, at Nunda, in the latter county, from whence it rises to the summit level 981 feet above the Erie canal. The length of the summit will be eight miles, and the whole fall, from thence to Olean, Cattaraugus county, on the Allegheny river, is seventy-eight feet. Whole lockage, ascending and descending, 1,059 feet. The length of canal from Rochester to Olean will vary little from 100 miles. The lockage is equal to 132 eight feet locks on the whole line; being about the same proportion of lockage as the Chenango canal. A passage from the Ohio valley to the Genesee valley is here 1488 feet above tide level, and is less elevated than any passage that has been examined either to the Potomac or the Susquehannah valleys. With regard to a supply of water for the summit level, it is remarked by the engineer that the whole of the Ischua Creek can be received into a summit pond; besides, the drainage of 190 miles of surface can be turned into it, so that the reservoir would be abundantly supplied with water. Mr. Roberts, engineer, gives the following account of the capacity of the streams in October, 1825.

Ischua Creek, cubic feet per minute	750
Lime Lake, Beaver Lake, and Peacock Lake,	400
Oil Creek, ...	450
Together, per minute,	1600

In the report referred to, the estimated cost of the proposed canal is 875,588 dollars.

The distance of Rochester from Albany, by the Erie canal, is 270 miles; from thence to Olean, by the proposed canal, say 90 miles; from Olean to Pittsburg, by the Allegheny river, (which has been navigated by steamboats,) 260 miles.

The surveys have been commenced at the summit level, and will be continued in both directions. The work will probably be commenced next spring.

Black River Canal.—The Canal Commissioners report, March, 1831, that the cost of the proposed canal from Rome to the High Falls of the Black river, a distance of thirty-six miles, and including a navigable feeder of nine miles, at Boonville, with the improvement of forty miles of the river navigation from the High Falls to Carthage, is estimated at 602,544 dollars.

The whole rise and fall from Rome to the Black river, is . 1,078 feet.
Length of canal and river navigation, 76 miles.

The supply of water is to be obtained from the Black river, which, at Smith's mills, is estimated to afford 20,000 cubic feet per minute, in ordinary dry seasons.

Summary of Canals completed.

	Miles long.	Cost.	Tolls, 1833.
Erie Canal	363	9,027,456 05	1,290,136 20
Champlain do.	63	1,179,871 75	132,559 02
Oswego do.	38	565,437 35	22,950 47
Cayuga and Seneca do.	20	236,904 74	17,174 69
Chemung do. and feeder	36	342,133 95	694 00
Crooked Lake Canal	8	136,331 95	200 84
	528	$11,488,035 99	$1,463,715 22

Navigable feeders on Erie, Champlain, and Cayuga and Seneca Canals, 11 miles,—making a total of 539 miles of canal navigation, completed and owned by the State. Average cost per mile, $21,314.

Statement of Tolls collected on the Erie Canal at Rochester, and other places west of the Genesee River, in 1832 *and* 1833.

	1832.	1833.
Rochester	154,541 08	168,452 37
Brockport	13,025 81	18,554 55
Albion	10,219 43	15,178 84
Lockport	28,434 22	50,562 39
Buffalo	58,232 09	73,812 79
	$264,452 63	$326,560 94

[N. Y. Annual Reg. for 1834.]

Ontario and Erie Ship Canal.—It is not a new idea that a ship canal should be constructed around the Falls of *Niagara*. The importance of such a measure has long been maintained by men of discernment and judgment. Sooner or later it will be accomplished.

Hudson and Delaware Canal, extends from the Hudson to Lackawaxen coal district; 140 miles.

Morris Canal, N. J., connects the Delaware river at Easton, Pa., with the Passaic at Newark, and is to be continued to the Hudson at Jersey city. It is intended to facilitate the transportation of Lehigh coal to New-York; length 97 miles. On this canal, the elevation, which is over 1600 feet, is overcome by *inclined planes*, instead of locks, the only instance now recollected of their application in this country. Width, 32 feet; 4 feet deep; lockage, 206·9 by 75, wood and stone.

Delaware and Raritan Canal, connects the Delaware river at Bordentown with the Raritan at New Brunswick, passing Trenton, Princeton, and Kingston, on its route. This canal is supplied with water by a feeder, also navigable, from the Delaware at or above Lambertsville. Length of the canal 29 miles, breadth 75 feet, and depth of water 7 feet.

Pennsylvania.—Internal improvements in this state are progressing with astonishing rapidity. It appears from the report of the Canal Commissioners, read in Senate December 6, 1832, that, of the works constructed by the State, there are completed in the canals now navigable, 479¼ miles; in hand and likely to be completed during the present year, [1833,] 103¼ miles; independently of these, there are others constructed at the expense of corporations, and now in actual use, 290¼ miles.

Canals constructed by the State.—1. Canal from Columbia, on the Susquehannah, to the mouth of the Juniata, and up the Juniata to Hollidaysburg at the eastern base of the Alleghany mountain—distance 171 miles 246 perches.

2. Canal from Johnstown on the Conemaugh, at the western base of the Alleghany, down the Conemaugh, Kiskeminetas and Alleghany, to Pitsburg—distance 105 miles. [The above lines, connected by the "Portage Railroad," over the mountain, form the great east and west communication. It has a double connection with Philadelphia, one from Columbia, by way of the Pennsylvania Railroad, and the other from Middletown, nine miles below Harrisburgh, and eighteen miles above Columbia, by the Union Canal.]

3. Canal from the mouth of the Juniata up the Susquehannah to the forks at Northumberland, then up the north branch to a point 2 miles below Wilkesbarre. Distance 96 miles 295 perches. [It is contemplated to extend this at some future day to the north line of the state, when a communication by canal and railroad may take place with the Erie Canal.]

4 Canal from Northumberland at the forks of the Susquehannah, up the west branch to the Muncy Dam—distance 26 miles 160 perches. [For extension see below.]

5. The French Creek Feeder, intended to supply with water the future communication between the Ohio and Lake Erie—length 19 miles.

6. A canal from Bristol to Easton on the Delaware—length 59 miles 240 perches. [This is the channel by which the coal trade of the Lehigh reaches Philadelphia.]

Canals constructed at the expense of Corporations, and now in actual use.—7. The Union Canal from the Schuylkill opposite Reading, to the Susquehannah at Middletown—length 82 miles 88 perches. Branch Canal and feeder, belonging to the Union Canal Company, 22 miles in length, with a railroad of four miles to the Pine Grove coal mines.

8. The Schuylkill Navigation, from Port Carbon on the Schuylkill to Philadelphia—length 108 miles.

9. The Lehigh Canal, from Easton on the Delaware up the Lehigh to Mauch Chunk—distance 46 miles.

10. A part of the Hudson and Delaware Canal, from Honesdale on the Lackawaxen to the mouth of that stream—supposed 20 miles.

11. Conestoga Navigation, an improvement of Conestoga creek by locks and dams, from its mouth up to the city of Lancaster—distance about 14 miles.

12. The Codorus navigation, an improvement of Codorus creek from its mouth up to the borough of York—length about 10 miles.

Total of canal navigation now in use, 759¼ miles.

The canals authorized and now in progress at the expense of the State, and likely to be navigable by the end of this year, [1833,] are

From Muncy Dam on the West Branch up that river to the mouth of Bald Eagle creek. Distance 40 miles and 18 perches. [This is an extension of No. 4, and will complete the improvement contemplated in that quarter.]

From two miles below Wilkesbarre up the north branch of the Susquehannah to the mouth of the Lackawanna—distance 12 miles 316 perches. [This is an extension of No. 3, and will leave about 90 miles towards the north line of the State untouched.]

From the confluence of the Beaver with the Ohio, (20 miles below Pittsburg,) up the former river to Newcastle—distance 24 miles 240 perches. [This is the commencement of a communication between the Ohio and Lake Erie, which will pursue a northerly direction up the valley of the Shenango to the summit at Conneaut Lake, thence to Lake Erie, at the town of Erie. At the Conneaut summit it will be supplied with water from French creek, by a feeder described above as No. 5. From Newcastle to Erie, by the route selected, will be about 78 miles.]

A canal and slackwater along French creek, from the commencement of the feeder to the junction of that creek with the Alleghany—distance 25 miles 224 perches. [This work does not form a part of any great communication.]

By this statement it appears that after the present year only 90 miles on the north branch of the Susquehannah river, and 78 miles between the Ohio and Lake Erie, will remain to complete the whole system of improvement adopted by the State of Pennsylvania, and upon which operations commenced in the summer of 1826, less than seven years ago. That system will embrace when completed:

1. A great line of communication from Philadelphia, passing by Lancaster, Columbia, Middletown, Harrisburgh, Lewistown, Huntingdon, Hollidaysburg, Johnstown, Blairsville, Pittsburg, Beaver, Newcastle, and Meadville, to the Borough of Erie, on Lake Erie. The whole distance 481 miles, of which 118 miles are by railroad, 20 miles by the Ohio river, and 343 miles by canal. Distance from Philadelphia to Pittsburg 358 miles. [This passes through the great iron region of the Juniata, the salt and bituminous coal of the Conemaugh, Kiskeminetas, and Alleghany, and a country abounding in agricultural product.]

2. A great line from Philadelphia to the junction of the Tioga with the North Branch of Susquehannah, on the boundary of New-York, where a communication is now forming with the Erie Canal, by way of Chenango Point. This line diverges from the former at the mouth of the Juniata, and passes Liverpool, Selin's Grove, Northumberland, Danville, Berwick, Wilkesbarre, Pittston, Towanda, and Athens. It passes through the Wyoming coal region, and opens a rich agricultural country to market. Whole distance 324 miles, of which 81 miles are by railroad, and 234 by canal—common to the great western route 81 miles of railroad and 43 of canal.

3 The West Branch Canal from the mouth of Bald Eagle to the Forks at Northumberland, where it unites with the line last mentioned. It opens the richest land in the State, the valuable iron of Bald Eagle valley, and the inexhaustible beds of bituminous coal on the West Branch and its tributaries. These articles will have their choice of markets, between Philadelphia and the interior of New-York, where both are needed.

4. The Improvement of French creek and the Delaware Canal, which at present are rather detached works than parts of any great system of communication.

Extract from the Common-Place Book of an Engineer.

"BEAVER DIVISION" OF THE PENNSYLVANIA CANAL.—This section of the Canal commences at the town of Beaver, on the Ohio River, at the junction of the Big Beaver River, 30 miles below Pittsburg, and ascends the valley of the latter river, and that of its tributary the Shenango Creek, till its termination in Mercer county, a total distance of 30 miles and 240 perches. Of this distance, 8 miles and 100 perches are composed of canal, and the remaining 22 miles and 140 perches are of slackwater, composed by the pools of 7 dams, backing up the water variously from 2 to more than 7 miles. There are 18 lift and guard locks on the line, which for beauty and strength of workmanship are not surpassed by any in this country. The construction of these latter, together with that of the dams, has been very materially delayed, first by the want of the necessary appropriations, and afterwards by the unusually high and rapid freshets in the Shenango and Beaver Rivers. Still, however, under all these disadvantages, the canal will be finished by the end of 1834, and owing to the scientific and economical arrangement lately adopted by the state of Pennsylvania, in contradistinction to her previous course, this canal will be finished in the best manner, and handed over to the superintendent for the comparatively small sum of $481,282 96 cents, or about $16,650 per mile. Its construction was warranted by the prospect, when completed, of its yielding a handsome annual revenue.

MIAMI CANAL.—This canal extends from Dayton to Cincinnati, 66 miles, where it connects with the Ohio by locks which overcome a difference of level of 112 feet.

OHIO AND ERIE CANAL.—This canal commences at Cleveland, on Lake Erie, and passes through the heart of the State to the Ohio river at Portsmouth. The main line of this canal is 310 miles in length, with 24 miles of navigable feeders. The work was completed in 1832, and with the Miami Canal, of 66 miles, making the entire navigable canals in the State, 400 miles, at a cost of about $5,500,000. And it has beyond all question increased the value of the State more than *three times* that amount, as do all judiciously located and well constructed works of the kind.

WABASH AND ERIE CANAL.—This work is intended to connect Lake Erie with the Wabash, and of course with the Ohio and Mississippi. An easier communication can, probably, be effected between Lake Erie and the Ohio on this line than on any other, and although we have very little information relative to its cost and progress, yet from the general topography of the country, it may well be assumed that a more favorable route for such a work is seldom found. It is progressing rapidly to a state of completion, as we understand. Although no intimation has ever been given us that the route could be made of sufficient dimensions for steamboats, yet it appears to us susceptible of, and highly favorable for, being so enlarged as to admit such steamboats to pass as navigate the rivers. Should this be done, and the communication be made direct from Lake *Erie*, instead of the more circuitous route through Lake Michigan, this, instead of the Chicago and Illinois route, will be the most favorable, and as Indiana is in the field, and her canal now under-way, if she would enlarge it, so as to permit the use of the Lake and Mississippi craft, she will secure an immediate advance in her general prosperity of at least *half a century*. Thirty miles of this canal were under contract, in 1833, to be completed in 1834, and the work will probably be completed in 1835 or '6, for boats.

CHICAGO AND ILLINOIS CANAL OR RAILROAD.—This straight, or portage, may be termed the *Panama* of the United States. It will, ere long, be considered in that light by business men, and the result will inevitably be a *steamboat canal* from the Falls of the Illinois to Chicago, on Lake Michigan, which, together with a canal of similar construction around the Falls of *Niagara*, and from *Oswego* to the *Hudson river*, will give to the enterprise of the country an impetus which will astonish even the most *sanguine* of the present day. The distance from Chicago to the Falls is about 90 miles, through a country of the most favorable character for such an improvement. The elevation from the Lake is very trifling, only 25 feet, and the descent from thence to the foot of the Rapids, 175 feet in the distance of 80 miles, or a fraction over 2 feet per mile. Surveys have been made both for a canal and a railroad. A railroad would be preferable, unless the canal was of sufficient size for steamboats or sloops, which could also navigate the lakes. At all events, whether a canal or railroad shall be built, if soon effected, it will be amongst the most important works in the country. It would bring direct to New-York much that now goes to New-Orleans.

Mr. Bucklin, the engineer, who surveyed the route, estimates that a canal, drawing the water from the Lake for the whole distance, may be made for $4,043,036; if supplied with water from other sources, and lock down each way from the summit, it may be made for $1,601,695. A railroad for $1,052,488, and a M'Adam road for $1,041,624. A ship canal could probably be made, locking both ways, for $4,000,000; and upon a level with the Lake for less than six millions.

LOUISVILLE AND OHIO CANAL.—This canal is constructed around the falls of the Ohio River at Louisville, and is of dimensions sufficient to pass the largest steamboats; and greatly facilitates the immense business on that river.

[*To be continued.*]

[*From the National Gazette.*]

Extract from a letter dated Baltimore, 25th July, 1834:

"The display upon the Rail-Road here on Sunday last, exceeded any thing of the kind I have ever seen. I walked out to the Depot, where I met the train from the West; it consisted of 14 cars, amongst which were three, each running on eight wheels, the longest carrying 100 passengers, and the other two about 60 or 70 each. The remaining eleven cars were of various dimensions, carrying from 18 to 40 passengers each, making the whole number, as I was informed, more than 600 persons. This immense load was drawn by a single engine, at the rate of 15 miles an hour, with perfect ease.

What a triumph does this spectacle afford, of the power of science, when directed by a sound judgment and aided by patient industry. It was believed that, on account of the frequent and short curvatures on the Baltimore and Ohio Railway, it would be found impossible ever advantageously to use steam as a moving power upon this road; and indeed, I believe that no engine upon the plan of the English locomotives would safely run on it; but by persevering in a series of experiments, and *adapting the form of the engine wheels to the curves of the road*, this company have finally succeeded in constructing engines in their own work-shops, which burn anthracite coal exclusively as a fuel, and which fully answer all the purposes desired.

It would have required sixty of our ordinary stage-coaches, two hundred and forty horses, and sixty drivers, to convey this number of passengers eight or nine miles an hour upon our best turnpike-roads; and yet the whole was carried at nearly double that speed by one engineer and one fireman, and at an expense which, I learn, is estimated not to exceed sixteen or seventeen dollars per day, including the cost of fuel and repairs."

BOSTON AND LOWELL RAILROAD.—The excation of the ledge is now completed, all but levelling the unevenness of the bottom, and no doubt the whole route may be, and perhaps will be, completed in November; but it is not intended to put on the locomotive till the next spring. The work has been slowly, surely, and faithfully done, and when once it is said to be complete; the proprietors may congratulate themselves upon the certainty that no great deductions from the income will be necessary for repairs.

Two locomotives are now being built at the machine shop in this town, where the union of the best Yankee and foreign mechanical skill produces the highest perfection in machinery. One is to be called the "Double Speeder, and the other "David Crockett," and when they "go ahead," it will be in earnest.—[Lowell Journal.]

Avoylle Ferry, on Red River, La., June 4, 1834.

To the Editor of the Railroad Journal.

SIR,—Although our early part of the season was later and more backward than usual, owing to colds and rains, our crop of cotton is as promising, and more than was ever cultivated in this country. If the season should continue favorable, the present crop will far exceed any former year in this section of country.

Crops of corn are also generally promising; early plantings now in silk and tassel, and some in "roasting ears," (as our phrase is.)

P. G. V.

STRENGTH OF CORDAGE.—The Boston Hemp Manufacturing Company have lately put up a machine, at their ropery on the Milldam, for the purpose of determining the strength of their cordage, spun in the common method by hand. A great number of experiments have been made by breaking ropes of various sizes and kinds on this machine, and the following exhibits the average result of these trials. The figures show the number of pounds required, *by each inch of the square of the girt of the rope to part it.*

Whale line spun by hand, best that could be produced,	776	lbs.
Whale line spun by machines,	994	
Russia bolt rope, 1st quality,	723	
Bolt rope of machine spun yarn,	915	
Running rigging, 1st quality Russia,	442	
Running rigging, American, spun by hand,	631	
Running rigging of machine spun yarn,	717	
Cotton line,	604	
Coire rope,	215	
Rope made of Manilla hemp,	610	
Rope made of New Zealand flax, *Phormium Tenax*,	722	
Mean of all hand spun hemp rope,	633	
Mean of all machine spun hemp rope,	875	

Showing the machine spun rope to be 36 per cent. stronger than the hand spun. If, however, we reject the trials on Russia cordage, which is very weak, the superiority of the machine spun ropes is reduced to 24 per cent. over all others.

In no instance whatever, was the trial on machine spun ropes made on selected specimens, but the pieces to be tested were taken from common coils as made for use. Indeed, it happened that the machine spun ropes, except the whale lines, were made of hemp inferior in quality to that usually wrought in the machines. The modulus of cohesion, of the strongest ropes in these experiments, is 30,700; or a rope of this strength could be let down into a pit 30,700 feet, or 5-8ths of a mile, before it would be broken by its own weight. A rod of iron can sustain itself, according to Mr. G. Rennie, only for a length of 19,700 feet.

On the 27th of March, by the politeness of Mr. Treadwell, we witnessed the operations of the machinery for preparing the hemp and spinning the yarn; and we were also shown the method of impregnating the ropes with tar, which is done uniformly throughout their whole thickness, the tar being kept at a temperature below the boiling point. The ropes made of these yarns have the appearance of being *stained* rather than *tarred*.

The superior strength of the ropes made from yarn spun by machinery appears to consist in this, that the fibres in the middle of the yarn are nearly of the same tension as those of the outside, whereas, in the yarn spun by hand, they are much more tense in the middle; and the short fibres being the first to give way, the whole stress is thrown upon the outside ones, which, being fewer in number, consequently cannot bear so much strain as a rope made up of fibres of equal tension.

The machine for trying the strength of ropes is so constructed as to try them fairly and accurately. The following experiments on the strength of three ropes were tried in our presence, and we have no doubt of their correctness.

No. 1. Whale line spun by hand—girt 2 inches; broke by 2240 pounds.

No. 2. Whale line made by Boston Hemp Company, spun by machinery—girt 1 $\frac{7}{8}$th inches; broke by 3520 pounds.

No. 3. Running rigging made by the Boston Hemp Company—girt 2 $\frac{1}{8}$th inches; broke by 3440 pounds.

As No. 2 was one seventh smaller than No. 1, we should add 502 pounds to the weight it actually bore, making 4022 pounds, for the weight it would have borne, if it had been of the same size as No. 1: consequently it was 64 per cent. stronger than No. 1. Again, No. 3 was one ninth larger than No. 1; we must therefore deduct from the weight it actually bore 382 pounds, leaving 3058 as the weight it would have borne, had it been as small as No. 1. It was therefore 25 per cent. stronger than No. 1.—[The Mechanic.]

Orffyreus' Wheel.—Gravesend, in his Œuvres Philosophiques, published some time about 1774, at Amsterdam, gives an account of a singular machine constructed by one Orffyreus, which was styled a perpetual motion. The facts in relation to it, as nearly as we can ascertain, were simply these: A large circular wheel, twelve feet in diameter, and fourteen inches thick, was made of very light thin deal boards, resembling a drum, as mechanics call it, for carrying bands. The sides, or rather ends, were covered with waxed cloth, to prevent any one from discovering the inside. Through the centre was an iron axle, the gudgeons of which rested on two upright pillars, in the manner of hanging a grindstone. On giving it a slight motion either way, its revolutions speedily increased to twenty-five a minute. For two months it never varied in the least from that motion. Being placed in a chamber, at the residence of the landgrave of Hesse, the door was fastened, and the seal of his highness placed on the lock. At the expiration of sixty days the apartment was opened, and the wheel found revolving at the usual speed. It was then stopped to prevent it from being worn out. The inventor was so incensed because Professor Gravesend undertook to examine it, that he broke it in pieces before his face. The landgrave once saw the inside, but, being sworn to secrecy, only said it was very simple. Both the inventor and his friend died soon after, and all knowledge of its constructionr is therefore lost to the world.—[Scientific Tracts.]

Mixed Blood of Americans.—"It is acknowledged," says Cicero, "that literature, polite arts, religion, agriculture, laws, and social rights, originated in Athens, and were thence distributed over all nations." The fertility of the soil, the excellence of the climate, the freedom of the government, and the enterprising spirit of the people, must have co-operated in producing this transcendant and pre-eminent state of human exaltation. And if a comparison was instituted in those respects between that country and ours, in what important part should we be deficient!

We are perhaps more favored in another point of view. Attica was peopled from Egypt, but we can boast of our descent from a superior stock. I speak not of families or dynasties; I refer to our origin from those nations where civilization, knowledge, and refinement, have erected their empire, and where human nature has attained its greatest perfection. Annihilate Holland, Great Britain, Ireland, France, and Germany, and what would become of civilized man? This country, young as it is, would be the great Atlas remaining to support the dignity of the world: and perhaps our mingled descent from various nations may have a benign influence upon genius. We perceive the improving effects of an analogous state upon vegetables and inferior animals. The extraordinary characters which the United States have produced may be in some measure ascribed to the mixed blood of so many nations flowing in our veins; and it may be confidently predicted, that the operation of causes, acting with irresistible effect, will carry, in this country, all the improveable faculties of human nature to the highest state of perfection.—[Scientific Tracts.]

Large Reflecting Telescopes applicable to Exact Theoretical Astronomy. [From the Repertory of Arts.]

Sir John F. W. Herschel has rendered large reflecting telescopes applicable to the nicer purposes of exact theoretical astronomy. Although the science of astronomy itself does not fall within the plan of the Repertory, yet the construction of astronomical instruments, we conceive, belongs strictly to the department of practical knowledge which it is our purpose to improve and to extend. In accordance with this view of the object of our journal, we now lay before our readers an account of the process by which, in the accomplished hands of Sir John F. W. Herschel, (whose inheritance of his illustrious father's talents embraces alike the ingenuity required for the constructiou of astronomical instruments, and the accuracy, skill, and profound acquaintance with the subject necessary for their successful employment in the solution of the higher problems of astronomy,) the only obstacle which remained to the application of large reflecting telescopes to the nicer purposes of exact theoretical astronomy has at last ceased to exist.

In the second part of the Philosophical Transactions for the past year is an elaborate paper by Sir John Herschel, consisting of observations of nebulæ and clusters of stars, made at Slough, with a twenty-feet reflector, between the years 1825 and 1833. An appendix explains the manner in which the reduction of the observations, of which the paper itself is a collection, has been executed by the author. It is in the course of this explanation that the final improvement of the reflecting telescope is described. A difficulty presented itself in the reduction of the observed polar distances to mean polar distances at a fixed epoch, arising from considerable fluctuations in the value of a certain expression, which was a function of the times of the transit of the objects observed over the vertical wires of the eye-piece of the telescope. These fluctuations in value, to which the function alluded to was found to be liable in very variable degrees at different epochs of the observations, were occasioned by instability of the instrument, which was partly due to hygrometrical changes, but by far the worst and most intractable part of the fluctuations appeared "to have taken its rise from the shifting of the line of collimation, owing to the mirror taking a new bearing in its cell." "I regret," continues Sir J. Herschel (Phil. Trans., 1833, p. 488), "that I did not earlier perceive this cause of error. It has only recently occurred to me, and the remedy almost at the same instant suggested itself in a simple, and what, I trust, will hereafter prove an effectual application, of the collimation principle of Rittenhouse and Kater. It consists in attaching to the *inside* of the wooden tube of the reflector a small achromatic telescope, having its object glass turned towards the speculum, and its eye end projecting at right angles to the axis of the tube through an aperture in the side, the cone of rays being deflected outwards at a right angle by a small mirror 45° inclined to its axis. In the focus of the object glass (thus rectangularly deflected,) is fixed a cross of fine spider-lines, strongly illuminated by a lamp (capable of being shut off when not wanted,) which also serves to illuminate the field. The cross is so situated, that its image, seen in the telescope as an object infinitely distant, (according to the principle of the collimator,) makes, with all its arms, angles of 45° with the horizontal and vertical wires of the sweeping eye-piece. In the beginning of a sweep, the intersections of both crosses are brought to exact coincidence (by a method presently to be explained); and it is evident that if in the progress of the sweep the slightest shifting of the mirror in its cell should produce a motion of the line of collimation, it cannot fail to be detected by the apparent recess of the two crosses from their original common intersection. A relative motion, to the amount of two seconds ot space, either laterally or vertically, cannot possibly escape detection, as I have convinced myself by many trials; and so satisfactory has this mode of overcoming the difficulty in question proved, that I have no hesitation in saying, that the only obstacle to the use of large reflectors for the nicer purpose of exact theoretical astronomy (viz. the error caused by the shifting of the mirrors in their cells, by reason of their great weight, and the danger of securing them by strong pressure,) has ceased to exist. It is not, however, sufficient to have the means of readily detecting error, without possessing that of correcting it with equal readiness, or at least measuring its amount. A very simple and effectual contrivance accomplishes this. The two adjusting screws by which the mirror case is supported against the bottom of the tube are terminated outside of the latter by large disks or wheels of wood about six inches in diameter, grooved at their edges. Round these re-entering cords are conducted over pulleys, to a convenient point within reach at the mouth of the tube, forming a kind of reins, which hang loose when not in use, but by tightening or drawing one or other of them, any motion, however large or minute, may be given to the line of collimation at pleasure. By the aid of this mechanism, the perfect adjustment of the line of collimation (to the full extent of the optical powers of the instrument) is performed in an instant, and may, if we please, be repeated at every observation, being attended with no trouble; nay, the line of collimation may be purposely deranged to any extent, and immediately corrected. So that by graduating the grooved disks, and adopting an index to each, a very complete distance and position micrometer, for the measurement of double stars, might be formed, in which, if necessary, two lucid points might imitate the two stars to be compared."

To the foregoing account of his application of the collimating principle, Sir J. Herschel annexes the following note:

"My first collimator consisted of a small object glass, by Fraunhofer, of about one inch and a half in diameter, and twelve inches focus. When applied to the twenty-feet reflector, as described in the text, it formed an admirable microscope with its full aperture—an extraordinary proof of the perfection of its construction, this being, doubtless, the severest test to which an achromatic object glass can be possibly subjected. The most beautiful object I can remember to have seen in telescopes was Jupiter entering, perfectly defined, and with all the appearance of a real globe, into the image of a small glass globule, placed in the focus of the collimating telescope. It

seemed like the mutual penetration of two solids, or rather two essences of different natures, the one bright and ethereal, the other dark and adamantine. This most exquisite specimen of workmanship was destroyed by an accident. That with which I have been forced, temporarily, to replace it, bears no comparison with the original."

On the Employment of Filters in Chemical Analysis. By Dr. TURNER, Professor of Chemistry in the University of London. [From the Repertory of Arts.]

In my own researches I am in the habit of determining the weight of substances collected on a filter in one of three different ways. One of these, introduced by Berzelius, consists in burning the filter in a platinum crucible, and deducting the weight of its ashes. This method is peculiarly applicable to the analysis of minerals where such substances as silica, alumina, and lime, are frequent. Even some substance of easy production, such as peroxide of iron and sulphate of baryta, may be safely treated in the same way; but in these cases it is advisable, not only, as usual, to separate the mass of the precipitate from the filter before setting it on fire, but to moisten both with a little nitric acid, and to insure very free exposure to the air during the burning of the paper and the subsequent ignition. For such purposes I commonly use some excellent Swedish filtering paper, kindly procured for me by Berzelius.

Another method is that of the double filter, introduced by Dr. Thomson, which I have used in all the experiments where filtration is spoken of in the present and former communication. Both Berzelius and Dr. Thomson himself seem inclined to doubt the accuracy of this method; and it is certainly liable to objection, except with certain precautions and with very compact filtering paper. The paper which I use for the double filter is considerably thicker than the Swedish paper, and of such compact texture, that recently precipitated oxalate of lime, or sulphate of baryta, thrown down by Glauber's salt in a neutral solution of the chloride of barium, may be filtered by it. The precautions employed are these: The paper, folded into filters, is macerated in dilute nitric acid for two days, is then fully washed with warm distilled water, and dried at a temperature of 212° Fahr. After acquiring its hygrometic moisture, two of the filters of nearly the same weight are poised against each other, and any small difference marked in pencil on the lighter one. Before being used a pin-hole is made in the outer filter, in order that any accidental imperfection in the inner filter should be made apparent. After filtration both filters are dried at the same temperature, and are afterwards allowed to recover their hygrometric moisture completely before removal to the balance. In repeated trials I have found a pair of filters to recover, after use, their original relation in weight to within the 100th part of a grain; nor have I ever noticed a greater deviation than may well be expected in every process where filtration is concerned. Additional testimony of the same kind will be found in my Essay printed in the Philosophical Transactions for 1819 [1829], where, in two sets of experiments, the same point is investigated by the use of double filters, and by evaporating the precipitate to dryness without filtration.

A third method consists in employing a single filter, which is dried, before and after filtration, at some fixed temperature, as at 212° Fahr.; and when so dried, is inclosed in a light silver vessel, the cover of which is tightly fitted by grinding. The filter may thus be deliberately weighed without absorbing moisture during the operation. In case of its being inconvenient to employ an uniform temperature, the filter may be dried at a variable heat, be allowed to absorb hygrometric moisture, and afterwards kept at about 50° Fahr. for two hours in a closed bottle, the bottom of which is covered with pulverized quicklime. In this method, while operating at least with paper of English manufacture, it is essential, more so than with the double filter, to have previously macerated the filter in dilute acid; for all such paper which I have examined contains lime.—[Phil. Trans., 1833, Part ii. p. 542.]

[*From the New-York American.*]

TABLE OF GOLD COINS.—We are indebted to Mr. Reid, the writer of the able Lecture from which we published an extract on Wednesday, for a Comparative Table of Gold Coins, which, by the recent laws, are made current in the United States, and of those coins only.

The table we published some time ago from Bicknell's Reporter, included a great many gold coins, about which, as they are below the minimum standard of fineness required by our laws to constitute them a legal tender, it is not a matter of interest to concern ourselves. The table now published includes all the coins, and none others, made by the late bills a legal tender.

TABLE OF FOREIGN GOLD COINS,

Which it is declared by the recently enacted Foreign Gold Coin Bill "shall pass current as money, and be receivable in all payments, by weight "for the payment of all debts and demands, from and after the 31st day of July, 1834," viz: 1. The Gold Coins of Great Britain, Portugal, and Brazil, of not less than 22 carats fine, at the rate of 94.8-10 cents per pennyweight: 2. The Gold Coins of France, nine-tenths fine, at the rate of 93.1-10 cents per pennyweight: and 3. The Gold Coins of Spain, of the fineness of 20 carats 3.7-16 grains, at the rate of 89.9-10 cents per pennyweight.

NOTE.—The Gold Coins of Mexico and Colombia not being 20 carats 3 7 16 grains fine, are not included in the Table, because they are not legal tenders for the payment of debts and demand

1. Gold Coins of G. Britain, Portugal and Brazil, 22 Carats fine.

	Weight.	Contents in pure gold.	Value in U. S. Currency at 94 8-10 cts. per dwt.	Value in U.S. Currency estimated by the quantity of pure gold compared with the pure gold in the new Eagle of 232 grains.
	dwt. gr.	*grains.*	*d. c. m.*	*d. c. m.*
G. BRITAIN—				
Guinea, (half and 7s. piece in proportion..	5 9 39-89	118.6	5 11	5 11 2
Sovereign, (half in proportion.).....	5 3 171-623	113	4 86 9	4 87*
PORTUGAL—				
Dobraon of 24,000 Rees, (half in proportion.)..	34 12	750	32 70 6	32 71 9
Dobra of 12,800 Rees,..	18 6	401.5	17 30 1	17 30 6
Moidore,.....	6 22	152.2	6 55 7	6 64 2
Millree, 1755.....	19 3-4	18.1	0 78 0	0 78 0
BRAZIL—				
Dobraon.....	34 12	750	32 70 6	32 71 9
Dobra	18 6	401.5	17 30 1	17 30 6
Moidore,.....	6 22	152 2	6 55 7	6 64 2

N. B.—There are several Gold Coins of Portugal and Brazil, the Joannese, the pieces of 16, 12 and 8 festoons, and the old and new crusado, which are not included in the above Table, because they are not 22 carats fine, and of course are not legal tenders, the words of the Act being express—"the gold coins of Great Britain. "Portugal and Brazil *of not less than 22 carats fine.*"

2. Gold Coins of France, Nine-tenths fine.

	Weight.	Contents in pure gold.	Value in U. S. Currency at 93 1-10 cts. per dwt.	Value in U.S. Currency estimated by the quantity of pure gold compared with the pure gold in the new Eagle of 232 grains.
	dwt. gr.	*grains.*	*d. c. m.*	*d. c. m.*
Double Louis, coined since 1786, (single in proportion,).....	9 20	212.6	9 15 4	9 16 3
Double Napoleon, (single in proportion.).....	8 7	179	7 71 8	7 71 5
New Louis,.....	4 3 1-2	89.5	3 85 9	3 85 7

NOTE.—The Double Louis, Louis and Demi-Louis, coined before 1786, not being nine-tenths fine are not included in the Table, because they are not legal tenders. Neither are the Double and Single Napoleon, or the New Louis exactly nine-tenths fine, but the deficiency is so very small that it is believed it is covered by what is called the remedy of the Mint.

3. Gold Coins of Spain, 20 Carats 3 7-16 grains fine.

	Weight.	Contents in pure gold.	Value in U. S. Currency at 89 9-10 cts. per dwt	Value in U.S.Currency estimated by the quantity of pure gold, &c. &c.
	dwt. gr.	*grains.*	*d. c. m.*	*d. c. m.*
Quadruple Pistole or Doubloon, coined before 1772, (double, single and half in proportion,)..	17 8 1-2	375.3	15 50	16 17 6
Quarter Pistole, or Gold Dollar, coined before 1772,.....	1 3	24.2	1 01 1	1 04 3
Doubloon of 1772, (double and single in proportion,).....	17 8 1-2	372	15 50	16 03 4
Half Pistole of 1772.....	2 4	46.3	1 94 7	1 99 5
Quarter Pistole of 1772,.....	1 3	23.9	1 01 1	1 03

NOTE.—The Quadruple Pistole, Double Pistole and Pistole of 1801, as well as the Coronilla, Gold Dollar or Vintem of 1801, not being 20 carats 3 7-16 grains fine, are excluded from the Table, not being legal tenders. The law, in fact, as far as the Spanish Coins are concerned, will be nearly a dead letter, because the other Coins enumerated in the above Table are considerably more than 20 carats 3 7-16 grains fine. Their value as currency at the rate put on them by law, therefore, is less than their value as bullion. Thus the Doubloon coined before 1772 is only worth as currency at the rate of 89 9-10 cents per dwt. $15 50, while as bullion it is worth $16 17 6.

* In the above Table the Coins are all presumed to be of full weight, but fractional parts of a mill have been disregarded in the calculation of their value. It will be found to be a sufficien approximation to the truth for all ordinary purposes. To those who wish perfect accuracy, I would observe that the quantity of pure gold in the Sovereign is 113 18-11,214 grains, and that the true value of the Sovereign compared with the new Eagle of 232 grains is $4 87 7 100. This is also the true par of Exchange between the United States and London, and is equal to a premium of 9 7-10 per cent., as near as can be calculated, on the nominal par of $4 44 or 109 7-10 for 100.

W. REID.

AGRICULTURE, &c.

Cultivation of the Grape. By R. T. To the Editor of the New-York Farmer.

I am glad to observe you are disposed to devote some space in the columns of your useful periodical to draw the attention of the agriculturists of this country to the cultivation of the vine.

It appears this is destined to become one of the leading branches of industry that will not only richly reward the enterprising and public spirited individuals who have embarked in it, but will at the same time afford them the pleasure of knowing that they are promoting the great objects of temperance, by substituting the pure juice of the grape, a healthy beverage, sanctioned by the authority of our ablest physicians, for the "liquid poison and poisonous liquors" that are blasting the physical and mental energies, the health and happiness, of a large class of our fellow-creatures.

You will, however, find some difficulties to overcome, some prejudices to remove, growing out of the unsuccessful attempts that have been made to introduce the foreign vine instead of those which are indigenous to our own soil, before you can convince the owner of every well cultivated farm in the United States, that it would be conducive to his interests that a vineyard should occupy a portion of it.

I rejoice that there is no necessity for the cultivation of foreign vines for our tables, or for the manufacture of wine, for there is now, fortunately, sufficient information on this subject to speak without the fear of contradiction, *that they cannot be profitably propagated by open culture in this climate.* We have the Isabella, Catawba, York, Madeira, and other native vines, which thrive admirably well, make excellent wine, and are good table fruit, largely cultivated in Pennsylvania, have commenced in New-Jersey, with very fair prospects, and in the southern part of the State of New-York. These will unquestionably succeed; and the more light and information you can diffuse among the agricultural portion of our population upon this interesting subject, that may well claim the patronage of every friend of temperance and national economy, the sooner will they be able to tender their acknowledgments to you, for promoting their interests, and making *them* instrumental in consummating the great temperance reformation that is taking place in this country.

Wheat Worm.—It is said that the wheat in this and the neighboring counties is suffering great injury from the ravages of a worm. It is the Vibrio tritica, and a full description of it is to be found in the Penny Magazine, for August, 1833.

The only remedy against a recurrence of the evil is to steep the seed wheat in water thrown upon unslaked lime.—[Schenectady paper.]

Price of Land in Virginia.—The salt tide region of Virginia possesses such great advantages for farming, and offers so many inducements for the investments of capitalists, that it seems to a stranger not only remarkable, but unaccountable, why agricultural profits and improvements should be generally so low, and the prices of land still more depressed: poor lands, but such as have abundant and cheap means for being enriched, often selling at from $1 to $2 the acre—and even such as are already rich, at from $5 to $20. Many tracts at such prices are on waters among the best in the world for navigation—and all are convenient to them, and to some one or more of the market towns of the Chesapeake.—[Farmers' Register.]

Agricultural Fair in Germany.—A correspondent to the London Gardener's Magazine thus writes.

I know not whether, during your stay here, you observed the great meadow before the town, where what is called the October festival is held. This meadow is enclosed on the west by a range of gentle acclivities, disposed somewhat in the form of an amphitheatre. Every year, in October, a great multitude of people from all parts of the kingdom assemble at this festival, which was established by the Agricultural Society, for the exhibition of agricultural produce, and for the granting of premiums to the producers of objects worthy of reward.

Those farmers who distinguish themselves by their agricultural labors, or by the quality and genuineness of the breed of their horses, bullocks, sheep, and pigs, receive publicly, from the hands of the minister for the home department, and in the presence of the king and the whole court, the prizes previously awarded to them by the decision of agricultural judges. Public games and horse-races are connected with this solemnity. Thus, besides the great utility of this annual festival in encouraging and improving agriculture, it affords to the mere spectator a most pleasing spectacle and much genuine enjoyment. On these amphitheatre-like heights, where the Bavarian people, like the ancient Greeks at the Olympic games, annually assemble, a picturesque plantation has been laid out by order of the king. This plantation is to serve as an enclosure and background to a building, which is to have the character of a monument, and in which the busts of eminent national artists and men of letters will be placed. The plantation is in the natural style of landscape gardening; and, though it is as yet of little height, it has a very picturesque effect, which will be greatly increased when the architectural objects are finished.

Munich, July, 1833.

Obituary.—*G. Sinclair.*—Died, at New Cross Nursery, Deptford, March 13, Mr. George Sinclair, F. L. S., H. S., &c., nurseryman, in the forty-eighth year of his age. Mr. Sinclair was many years gardener to the Duke of Bedford, at Woburn Abbey, and conducted there, under the direction of Sir Humphry Davy, an extensive series of experiments to determine the nutritive powers of the British grasses and herbage plants. It was there also that Mr. Sinclair composed the *Hortus Gramineus Woburnensis*, a national work, which embodies the results of the experiments alluded to, and is the most important of its kind that ever was published. Mr. Sinclair was also the author of various other publications or articles, the last of which, we believe, was the *Treatise on Useful and Ornamental Planting*, published by the Society for the Diffusion of Useful Knowledge. In the history of British agriculture, the name of George Sinclair will hold a conspicuous station in all future times, as the introducer of a new and improved system of laying down lands in grass. Mr. Sinclair had a considerable knowledge of chemistry, and was a good vegetable physiologist; hence all that he wrote bore a character of scientific inquiry, as well as of practical skill. As a man, few stood higher in our estimation; and it may be truly said, that he was esteemed and beloved by all who knew him. His early death, we believe, may be chiefly attributed to the profound grief which preyed on him after being suddenly bereaved of an only daughter, who died in April, 1833, about the same time that Mr. Sinclair lost his father and his uncle.—[Loudon.]

NEW-YORK AMERICAN.

JULY 26—AUGUST 1, 1834.

LITERARY NOTICES.

We have still some letters of our Western correspondent lying beside us; and though they will probably appear in another form, some time during the Autumn, we shall still occasionally select one for publication in the meantime. The following describes the gradual change of scenery, from the populous and rich agricultural districts in the western part of Kentucky, to the broken and rude region that extends along its eastern boundary.

Forks of the Kentucky, April.

After discharging my tavern bill, on the day that I left Lexington I rode over about noon to the house of a friend in another part of the town, where an early dinner had been courteously provided solely for myself and the new travelling companion mentioned in my last; and our time not allowing us to pay that devotion to the excellent Madeira and old sherry which their richness and flavor would naturally claim, a bottle of each was quietly deposited in a basket, with some other accompaniments, and a servant despatched by our kind entertainer to guide us on the first stage of our journey.

Emerging soon from the beautiful environs of Lexington, we rode for an hour or two through narrow roads, where the moist, rich soil was fetlock-deep for our horses. But the inclosures, which were generally shut in by a worm-fence on either side, were exceedingly beautiful; and the woodland and arable were so intermixed, that the tall and taper trees of the former, now ranging in open avenues along a hill-side, and now disposed in clumps upon the meadows, as if set there by the eye of taste, produced the impression of riding through a magnificent park, whose verdant swells and embowered glades have been only here and there invaded and marred by the formal fences drawn through them.

We were in a celebrated grazing district, and entering the gate of a plantation towards evening, this park-like scenery continued to grow upon us. There were neither roads nor lanes through the plantations, but the respective owners having merely an open right of way through each other's grounds, nothing could be more devious than our route from gate to gate. It lay chiefly through the wooded pastures for which Kentucky is so celebrated, and the fresh young grass was at this early season like an elastic carpet beneath our horses' feet. The new foliage of the spring was still too tender to rustle in the evening breeze, and the moonbeams, which silvered the tops of the lofty tulip trees, and played through the acacia's slender screen, fell soft as sleep upon the greensward. Sometimes the frequent clumps would thicken into groves, whose depths it was idle to attempt to pierce; and then again where a rich fringe of underwood indicated the bank of a rivulet, enormous vines pendent from some ancient walnut, would fling their verdurous canopy over its fountain head.

After fording a number of fine brooks, whose full currents more than once washed our saddle girths, we came at last to our destination for the night. It stood upon an an eminence; a spacious old fashioned building, erected during the early settlement of Kentucky, and now in a state of considerable dilapidation. Our black guide, who was an old family servant well known to the proprietor, was our only letter of introduction, and the hospitable manner in which we were received and made at once at home, showed that we needed no more. The young planter, our host, was of an old Virginia family, and the room in which I slept was decorated with several family pictures in the costume of Charles the Second's time, whose faded colors and tarnished frames were in better keeping with the ancient exterior of the dwelling, than the neat apartment wherein I passed the night.

After an early breakfast, our horses were led to the door by three slaves—our entertainer's, a fine blooded gelding, having his saddle covered by a bear-skin, of which his master's rifle had robbed the original owner. All being ready for mounting, it was not yet without considerable difficulty that we got permission to start—our friendly host, who, the

night before, would scarcely hear of our leaving him in the morning, still insisting upon our "giving him at least a few days."

An hour after found us riding through a country of the same character as that already described but, the land beyond it seemed to lie in ridges against the sky; and topping one of these again, we saw for the first time a blue line of mountains darkening the horizon. It was so long since I had seen any thing of the kind, that I confess the effect upon me was almost thrilling. The sweeping prairies, the broad rivers, and magnificent vegetation of the West, were at once forgotten; and I thought only of the pine covered mountains of my native state, the rocky banks of its gushing streams, and the lonely lakes from which they take their rise—and I felt the while an indescribable longing to be "over the hills and far away." Those blue summits before me were the spurs of the Alleghanies, and though the main chain was yet hundreds of miles in advance, with a dozen intervening ridges of as many different names between, it was something, at least, I thought, to be once within their cool defiles. I now write to you from one of their inmost glens, and the feeling has hardly abated. To realize the delight I take in their rough embraces, you must, whatever may be your love of mountain scenery, have passed months upon the smooth prairies, or floated for weeks along the alluvial-banked rivers of the West.

From this point we rode for a short distance over a very indifferent soil, through a wood of oaks, in the centre of which we came to a spot that will, probably at no very distant day, be celebrated as a place of public resort. On the banks of a clear brook, that winds through the forest, there are no less than four or five mineral springs, within as many rods of each other, and each of a different quality. The two which have attracted most attention, are a sulpher and an oil spring; the last of which, from the quantity of oleaginous matter always floating upon its surface, is quite a natural curiosity. The proprietor, who contemplates creating an establishment upon the spot, lives in a log hut near the springs, and treated us very hospitably. His little establishment was neatly ordered; and he set before us a most acceptable repast of fish, ham, eggs, and coffee, for which he would not hear of receiving compensation.

The day by this time was half spent, and our host of the night before having out of mere politeness accompanied us thus far on our way, was compelled to return upon his tracks. He insisted, however, upon piloting us out of the wood, and then taking a kind farewell, he struck the rowels in his blooded horse, who, unembarrassed by the baggage which encumbered our patient roadsters, wheeled with a snort upon his hindlegs, and was instantly lost in the forest from which he had just emerged.

The country became now more and more broken, and less suited to cultivation, but watered by numerous rills from the hillsides; the feeders, probably, of a turbid torrent called the Red River, to whose banks we came just after sunset. The ferry-scow had been carried away by a recent freshet; and urging our horses to the rushing brink, we were only prevented from trying to ford or swim the stream by a number of persons who hurried to the spot from a mill hard by, and begged us to desist. How to get over though, otherwise, was the question; and it was so rapidly growing dark, that each moment rendered the delay more disagreeable. But the difficulty was soon solved by a byestander; who, guiding us to a spot further up the stream where he kept a canoe, it was soon loosened from its moorings, and placing our valices and horse furniture on the bottom, we crossed one at a time, swimming our horses over beside the canoe. They both in succession landed safely, though the office of getting them up the steep and slippery bank on the opposite side was no sinecure. It was quite dark before we re-saddled and started anew; and after dodging about for some time in the woods to find our road, we discovered by the moon, as she got above the tops of the trees, the print of a wheel in the bed of a brook, and followed this novel kind of turnpike up, until we came to the house of a tanner, where we obtained permission to pass the night. We were now entering what is called the knobs of Kentucky, a part of the State but little settled, and barren in comparison with the populous and fertile districts I had hitherto visited. Being off the main roads too, the accommodations are of course very different from what may be found upon more travelled routes, and my companion and myself were both compelled to take upon ourselves the duty performed by slaves the night before, and feed and groom our own horses. L. however, I find, has all the adaptability about him required on such a tour; and as for myself, you know I've been long since broken in.

Rising with the sun, the next morning found us by breakfast time, in a little village called Irvine. It was small, and, to appearance, any thing but flourishing; but its singular seclusion among these lonely-looking hills, with the bright green Kentucky—now for the first time crossing our route—flowing in front, had a pleasing effect. There was a new store lately opened in the place; and stopping to purchase some trifles, to the amount of a few shillings, the proprietor was so punctilious as actually to give a bill of sale for the amount, from which you may draw your own conclusion as to the customary business of the place. L. and myself had both a shrewd suspicion that we had added not a little to the capital of the town. I should not like the place the less, though, for wanting the bustle of more active life; and upon the whole, when I recall its appearance, as it broke upon me from the top of a neighboring hill, a day or two since, with the pale blue smoke curling up from its scattered chimnies, and courting the kindred mist that hung upon the wooded brows of the pyramidal hills around, I don't know what more quiet disposition I can make than to leave you till my next letter in the little town of Irvine. H.

A History of the United States, from the discovery of the American Continent to the present time; by George Bancroft. Boston: Charles Bowen. This is the first volume of a history, which may, it is computed by the author, extend to "four, or perhaps five, volumes." The period embraced in this, is from the first discovery of America to the restoration of the Stuarts.

We consider it a source of congratulation to the whole nation, that so accomplished a scholar, so patient an investigator, and so eloquent a writer, has undertaken the much needed task of writing a worthy history of these United States. In the volume before us, we see abundant evidence that, while truth will—at any expense of labor in ferreting it out from the original authorities, instead of relying, as is so common, upon the copies of copies—be fearlessly spoken, no prescription of time or great names will be allowed to sanction error.

Mr. Bancroft has well weighed the extent and importance of his undertaking; and he enters upon it with a full appreciation of the labor it will impose upon him, and of the years that must be consumed in perfecting it. From these he does not shrink; but, as he himself well expresses it, "unwilling to travel so long a journey alone," and "desirous as he proceeds to correct his own judgment by the criticism of candor," he now publishes the first volume. It will be received, we feel well assured, as a worthy offering to his country, from one of her able and best qualified sons.

We must make room for some extracts, in order to give our readers an idea of the style of the writer. Take, for instance, the following animated account of the march of *Ferdinand de Soto*, in Florida.—Soto had been a favorite and fortunate companion of Pizarro, in the conquest of Peru, by which he had amassed great riches, and these he ventured, as well as fame and life, upon the conquest of Florida, often before attempted in vain, and which then was supposed to be rich in gold:

Now began the nomadic march of the adventurers; a numerous body of horsemen, besides infantry, completely armed; a force, exceeding in numbers and equipments, the famous expeditions against the empires of Mexico and Peru. Everything was provided that experience in former invasions and the cruelty of avarice could suggest; chains for captives, and the instruments of a forge; arms of all kinds then in use, and bloodhounds as auxiliaries against the feeble natives; ample stores of food, and, as a last resort, a drove of hogs, which would soon swarm in the favoring climate, where the forests and the Indian maize furnished abundant sustenance. It was a roving expedition of gallant freebooters in quest of fortune. It was a romantic stroll of men whom avarice rendered ferocious, through unexplored regions, over unknown paths; wherever rumor might point to the residence of some chieftain with more than Peruvian wealth, or the ill-interpreted signs of the ignorant natives might seem to promise a harvest of gold. Religious zeal was also united with avarice; there was not only cavalry and foot soldiers, with all that belongs to warlike array; twelve priests, besides other ecclesiastics, accompanied the expedition. Florida was to become Catholic, during the scenes of robbery and carnage that were to follow. Ornaments, such as are used at the service of mass, were carefully provided: every festival was to be kept; every religious practice to be observed. As the troop marched through the wilderness, each solemn procession, which the usages of the church enjoined, was scrupulously instituted.

Then follows an interesting record of the wanderings and sufferings of this ill-fated band, through Florida, and regions which now constitute part of Georgia and Alabama, until, on the 25th April, 1541, *Soto*—the first of Europeans,—beheld the magnificent Mississippi. Within little more than a year, on the 21st May, 1542, worn out with exposure and suffering, and broken hearted by disappointment, he died on its banks. "His miserable end," says our author, "was the more observed from the greatness of his former prosperity. His soldiers pronounced his eulogy by grieving for their loss; the priest chanted over his body the first requiems that were ever heard on the waters of the Mississippi. To conceal his death, his body was wrapped in a mantle, and in the stillness of midnight was silently sunk in the middle of the stream: the discoverer of the Mississippi slept beneath its waters. He had crossed a large part of the continent in search of gold, and found nothing so remarkable as his burial place."

On the subject of the first introduction of African slaves into the isles and continent, there is a dissertation at page 184, and *seq.*, which is instructive, and which entirely vindicates Las Casas from the imputation of having first, through a short sighted humanity for the Indians, introduced this curse. When he made his petition to the Court of Spain, for the substitution of negroes for native Indians in working the mines, Negro slavery was already firmly established in Hispaniola, and the slave trade so common and lucrative, that it is shewn by our author, even the Virgin Queen, Elizabeth of England, was a partner with Sir John Hawkins in his Slave Voyages, and "became at once a smuggler and a slave merchant."

But we must take our leave of this attractive volume,—attractive both by the excellence of its literary and mechanical execution. We do so, by the following account of the voyage and landing of

The Pilgrims.—And now [1620] the English at Leyden, trusting in God and in themselves, made ready for their departure. The Speedwell, a ship of sixty tons, was purchased in London; the Mayflower, a vessel of one hundred and eighty tons, was hired in England. These could hold but a minority of the congregation; and Robinson was therefore detained at Leyden, while Brewster, the teaching elder, conducted the emigrants. Every enterprize of the Pilgrims began from God. A solemn fast was held. "Let us seek of God," said they, "a right way for us, and for our little ones, and for all our substance." Anticipating their high destiny and the sublime doctrines of liberty, that would grow out of the principles, on which their religious tenets were established, Robinson gave them a farewell, breathing a noble spirit of Christian liberty, such as was hardly then known in the world.

"I charge you before God, and his blessed angels, that you follow me no farther, than you have seen me follow the Lord Jesus Christ: The Lord has more truth yet to break forth out of his holy word. I cannot sufficiently bewail the condition of the reformed churches, who are come to a period in religion, and will go at present no further than the instruments of their reformation. Luther and Calvin were great and shining lights in their times, yet they penetrated not into the whole council of God. I beseech you, remember, 'tis an article of your church covenant, that you be ready to receive whatever truth shall be made known to you from the written word of God."

The Pilgrims were accompanied by most of the brethren from Leyden to Delft-Haven, where the night was passed "in friendly and Christian converse." As the morning dawned, Robinson kneel-

ing in prayer by the sea-side, gave to their embarkation the sanctity of a religious rite. A prosperous wind soon wafts the vessel to Southampton, and, in a fortnight, the Mayflower and the Speedwell, freighted with the first colony for New England, leave Southampton for America. But they had not gone far upon the Atlantic, before the smaller vessel was found to need repairs; and they enter the port of Dartmouth. After the lapse of eight precious days, they again weighed anchor; already they are unfurling their sails on the broad ocean when the captain of the Speedwell, with his company, dismayed at the dangers of the enterprize, once more pretends, that his ship is too weak for the service. They put back to Plymouth, to dismiss their treacherous companions, though the loss of the vessel was "very grevious and discouraging." The timid and the hesitating were all freely allowed to abandon the expedition. Having thus winnowed their numbers of the cowardly and disaffected, the little band of resolute men, some with their wives and children, in all but one hundred and two souls, went on board the single ship, which was hired only to convey them across the Atlantic; and on the 6th day of September, 1620, thirteen years after the first colonization of Virginia, two month before the concession of the grand charter of Plymouth, without any warrant from the Sovereign of England, without any useful charter from a corporate body, the passengers in the Mayflower, under the guidance of a faithless Captain, who had received a bribe to thwart their purposes, set sail for a new world, where the past could offer no favorable auguries.

Had New England been colonized immediately on the discovery of the American continent, the old English institutions would have been planted under the powerful influence of the Roman Catholic religion; had the settlement been made under Elizabeth, it would have been before activity of mind in religion had conducted to a corresponding activity of mind in politics. The Pilgrims were Englishmen, Protestants, exiles for religion; men disciplined by misfortune, cultivated by opportunities of extensive observation, equal in rank as in rights, and bound by no code but that which was imposed by religion, or might be created by the public will.

The eastern coast of the United States abounds in beautiful and convenient harbors, in majestic bays and rivers, the first Virginia colony, sailing along the shores of North Carolina, was, by a favoring storm, driven into the magnificent bay of the Chesapeake; the Pilgrims, having selected as the place for their settlement the mouth of the Hudson, the best position on the whole coast, were, by the treachery of their captain, conducted to the most barren and inhospitable part of Massachusetts. After a long and boisterous voyage of sixty-three days, during which one person had died, they espied land, and in two days more, were safely moored in the harbor of Cape Cod. Dutch cupidity and English intolerance combined to effect the first settlement of New England.

Yet, before they landed, the manner in which their government should be constituted, was considered; and, as some were observed "not well affected to unity and concord," they formed themselves into a body politic by a solemn voluntary compact.

"In the name of God, amen; we whose names are underwritten, the loyal subjects of our dread sovereign King James, having undertaken for the glory of God, and advancement of the Christian faith, and honor of our king and country, a voyage to plant the first colony in the northern parts of Virginia, do by these presents, solemnly and mutually, in the presence of God, and of one another, covenant and combine ourselves together, into a civil body politic for our better ordering and preservation, and furtherance of the ends aforesaid; and by virtue hereof, to enact, constitute, and frame such just and equal laws, ordinances, acts, constitutions, and officers, from time to time, as shall be thought most convenient for the general good of the colony. Unto which we promise all due submission and obedience:"

This instrument was signed by the whole body of men, forty-one in number, who, with their families, constituted the one hundred and one, the whole colony, "the proper democracy," that arrived in New England. John Carver was immediately and unanimously chosen governor for the year.

Men, who emigrate, even in well-inhabited districts, pray that their journey may not be in the winter. Wasted by the rough and wearisome voyage, ill-supplied with provisions, the English fugitives found themselves, at the opening of winter, on a barren and bleak coast, in a severe climate, with the ocean on one side and the wilderness on the other. There were none to show them kindness or bid them welcome. The nearest French settlement was at Port Royal; it was five hundred miles to the English plantation at Virginia. As they attempted to disembark, the water was found so shallow, that they were forced to wade; and, in the freezing weather, the very act of getting on land sowed the seeds of consumption and inflammatory colds. The bitterness of mortal disease was their welcome to the inhospitable shore.

The season was already fast bringing winter, and the spot for the settlement remained to be chosen. The shallop was unshipped, and it was a real disaster to find, that it needed repairs. The carpenter made slow work, so that sixteen or seventeen weary days elapsed, before it was ready for service. But Standish and Bradford, and others, impatient of the delay, determined to explore the country by land.—"In regard to the danger," the expedition "was rather permitted than approved." Much hardship was endured; but what discoveries could be made in Truro and near the banks of Paomet creek? The first expedition in the shallop was likewise unsuccessful; "some of the people that died that winter, took the original of their death" in the enterprize; "for it snowed and did blow all the day and night, and froze withal." The men, who were set on shore, "were tired with marching up and down the steep hills and deep vallies, which lay half a foot thick with snow." A heap of maize was discovered; and further search led to a burial-place of the Indians; but they found "no more corn, nor any thing else but graves."

At length the shallop was again set out, with Carver, Bradford, Winslow, Standish, and others, with eight or ten seamen. The cold was severe; the spray of the sea froze as it fell upon them and made their clothes like coats of iron. That day they reached Billingsgate point at the bottom of the Bay of Cape Cod, on the western shore of Wellfleet harbor. The next morning the company divided; those on shore find a burial place, graves, and four or five deserted wigwams; but neither people, nor any place, inviting a settlement. Before night, the whole party met by the sea-side, and encamped on land together near Namskeket, or Great Meadow Creek.

The next day they rose at five; their morning prayers were finished; when, as the day dawned a war-whoop and a flight of arrows announced an attack from Indians. They were of the tribe of the Nausites, who knew the English as kidnappers, but the encounter was without further result. Again the boat's crew give thanks to God, and steer their bark along the coast, for the distance of fifteen leagues. But no convenient harbor is discovered. The pilot of the boat, who had been in these regions before, gives assurance of a good one, which might be reached before night; and they follow his guidance. After some hour's sailing, a storm of snow and rain begins; the sea swells; the rudder breaks; the boat must now be steered with oars; the storm increases; night is at hand; to reach the harbor before dark, as much sail as possible is borne; and the mast breaks into three pieces; the sail falls overboard; but the tide is favorable. The pilot, in dismay, would have run the boat on shore in a cove full of breakers; "about with her," exclaimed a sailor, "or we are cast away." They get her about immediately, and passing over the surf, they enter a fair sound; and get under the lee of a small rise of land. It is dark, and the rain beats furiously; yet the men are so wet and cold and weak, they slight the danger to be apprehended from the savages, and, after great difficulty, kindle a fire on shore.

Morning, as it dawned, showed the place to be a small island within the entrance of a harbor. The day was required for rest and preparations. Time was precious; the season advancing; their companions were left in suspense. The next day was the "Christian Sabbath." Nothing marks the character of the pilgrims more fully, than that they kept it sacredly, though every consideration demanded haste.

On Monday, the eleventh day of December, Old Style, the exploring, forefathers land at Plymouth. A grateful posterity has marked the Rock, which first received their footsteps. The consequences of that day are constantly unfolding themselves, as time advances. It was the origin of New England; it was the planting of the New England institutions. Inquisitive historians have loved to mark every vestige of the pilgrims; poets of the purest minds have commemorated their virtues; the noblest genius has been called into exercise to display their merits worthily, and to trace the consequence of their daring enterprize.

The spot, when examined, seemed to invite a settlement, and, in a few days, the Mayflower was safely moored in its harbor. In memory of the hospitalities, which the company had received at the last English port, from which they had sailed, this oldest New England colony obtained the name of Plymouth. The system of civil government had been established by common agreement; the character of the church had for many years been fixed by a sacred covenant. As the Pilgrims landed, their institutions were already perfected. Democratic liberty and independent Christian worship at once existed in America.

THE COMPANION TO THE BIBLE, 2 vols. 12mo.: revised and altered from the English edition, by Rev. F. H. CUMING—Prot. Epis. Press, N. Y.—These two little volumes are admirably adapted to the use of Bible classes, Sunday Schools, and indeed families. They give a history of the Bible, its antiquity, with the proofs thereof, and of its authenticity; and with remarks and explanations connecting its various histories. They are well printed; and questions in the ordinary form, now adopted in school books, are prepared for each chapter.

LA REVUE FRANCAISE—Juillet. N. Y., Hoskins and Snowden.

LA FRANCE LITERAIRE—Nos. 2 and 3 of Vol. IV. N. Y., 36 Ann street.

These two French periodicals seem, we are glad to find, to prosper; and they deserve to do so. They are made up of selections from the choicest contributions of modern French literature, interspersed occasionally with articles translated from English periodicals. In the *Revue Francaise*, for this month, we were particularly struck with the well told and well sustained narrative—true, too, but of a truth more marvellous than fiction, as indeed the whole of the war of *La Vendée*, of which it is an episode, was—of *Jambe d'Argent and Daramfou*; and by the wholly fictitious but interesting story of *Un Nom*. In No. 3 of *La France Literaire*, the article *Fragmens d'histoire*, by Victor Hugo, and *Trafelgar* and *St. Cloud*, are among those that chiefly interested us. We again recommend these cheap periodicals to all learners and admirers of French.

AYESHA, THE MAID OF KARS; by the author of Zohrab and Haji Babi: 2 vols. Philadelphia: *Carey, Lea & Blanchard.*—Leaving the domain of Persia, Mr. Morier here appears on Turkish ground; and with the same success which attended his Persian stories, he brings before us the living Turk with his apathy, the offspring of fatalism—his cruelty and disregard of human life—his ignorance and intolerance. The story is improbable enough. We do not mean to reveal it; but the incidents—the pictures of real life—the usages and customs of the Musselmans—are, we do not doubt, given with as much fidelity as spirit. We give a couple of extracts. Osmond, the hero, son of an English Peer, having been seen talking to *Ayesha*—a grievous offence in that country of harems and secluded women—his arrest is ordered. It is thus described:

Bogos, by this time, with fear and trembling, had opened the door of his house to the Pasha's officers. The first salutation which he received, was a blow over the head for having detained them so long, and then he heard the question, "Where is the Frank Infidel who lives here?"

"*Effendi*—Sir," said the poor man, slow in betraying his guest, yet secretly charmed that the visit was not intended for himself, "he sleeps up stairs. But what is there at your service?—be pleased to sit:" at the same time he roared out to his wife to bring coffee and pipes. "You have done me honor; my house is exalted by your presence."

The Turks, who can never withstand the temptation of a cup of coffee, on this occasion proved themselves true men; and the two chokhadars, heedless of their commission, sat themselves down on the Armenian's cushions, awaiting the promised treat; thus giving time to the whole household to secrete such things as were likely to be seized if seen by their visiters, and which on such occasions they felt themselves justified in doing. The guard remained stationed at the street door.

Mustafa, who had the sharpest nose for the smell

of coffee of any one of the sons of Islam, no sooner heard the well-known sound of the mortar in which the roasted bean was braying, then he dressed himself in all haste, and making the wonted *Selam aleikum* to the unexpected guests,sat himself down in all dignity by their side, and lighting his first morning's pipe (ever a great luxury to the true smoker,) awaited the coming stimulant with as much unconcern as if that was the first object of consideration, whilst the reason of their visit was apparently quite of secondary importance.

They all sipped in solemn silence, after the coffee had been handed about by the obsequious Bogos,and smoked between whiles. When it was over, Mustafa duly said, "*Affiet ollah*—much good may it do you!" to which the others responded the same, and stroked their whiskers.

After a long interval, in which nothing was said, and little else done than inhaling and emitting smoke, Mustafa bethought himself that it might be as well if he inquired the object of this their early intrusion, so far as it concerned his master.

"Sir," said the head officer with gravity, "I am the head chokhadar of the Pasha; I am come to invite the Frank to take himself to the Pasha's presence."

"I," said the other officer, "I am deputy chokhadar; I am come to help to invite the Frank to come to the Pasha."

"*Pek ayi*—very well, said Mustafa, "upon our heads be it; *yavash, yavash*,—slowly, slow, we will proceed. The Bayzadeh at present sleeps;—when he wakes, upon our heads be it, we will go." This Mustafa said in the full persuasion that these persons were sent on the part of the Pasha to do his master honor, for he was not in the least aware that any thing had occurred which could give rise to a different treatment.

The officers, who had an eye to an immediate *backsish* or present, and who had also calculated how much the reversion of future donations or extortions might be worth to them, appeared to agree with Mustafa in taking a conciliatory view of the case; and although the chief, who was also the spokesman, said "Very well," and "by and by," and "slowly, slow," at first; yet, as the day began to show forth, he gradually threw haste into the composition of his speeches, and said "*Haidé, chabouk, gidelim!* Come along, quick, let us go!" until Mustafa was obliged to proceed to his master, and to inform him of the Pasha's message, and of his wish to see him without loss of time. However, before he went, he thought it right to inquire what might be the real object of the Pasha's wish to see Lord Osmond, since the armed men and the violence of the intrusion produced a doubt in his mind whether it might be honor or the contrary which was in preparation.

"*Bak*—see? said he to the officer, in a mysterious whisper: "is there any thing wrong?" at the same time winking his eye and shaking his head.

"What do I know?" said the other as mysteriously: then putting his two forefingers together in a parallel line, he said, "the Frank has been seen with a women.'

"Is it so," said Mustafa in astonishment; "that is bad," shaking his head at the same time.

"Truly it is bad," answered the officer; "our Mufti is much of a devil, and visits a *zamparalik*—a piece of scandal, with great severity; but, if you will put the affair into my hands, I can do many things."

Mustafa, who easily understood the hint, and who had taken fright at this disclosure, was not backward in putting a gold piece into the hand of his informer, as a retainer for his good offices. He then, with an accelerated step, sought his master, cogitating how the circumstance might have happened, and full of anger at his master's imprudence.

The intenseness of Turkish jealousy is proverbial: behold the form in which it displays itself—

"I was chanting the Azan at the usual time," replied the Iman; "I had half gone through it, when, from the minaret which looks upon your terrace, I saw a woman with a man. Curses be on all Infidels! May heaven pour misfortunes on their heads! The man was the Giaour we saw at the Pasha's the other day—of that I will take my oath upon the blessed Koran. The woman, Allah best knows who it was! I have said it, what more can I do?"

Suleiman Aga, during his speech, was gradually expanded into rage; his naturally placid face became sullen, and occasionally flashed with looks of revenge; low spoken sentences broke from his lips, he cursed in whispers, he clenched his hands, put them by turns on the head of his dagger, and his whole appearance might be compared to a pent-up volcano. He said nothing more to his informer, but seemed to be nailed to the spot upon which he sat, as if he were ready there to receive the announcement of any more misfortunes which might be preparing for him. A long silence ensued, when the priest said in a low voice, "Suleiman Aga, what shall we do?"

The only answer he got was, "I will send ruin to his father and mother," whilst his eyes looked upon vacant space, and his head remained fixed in one position.

"Speak, O man;" continued the priest: "what is to be done?"

"*Pezevenk!*—rogue!—wretch!" softly breathed the jealous Turk.

"*Ai Gardach!*—brother, are you turned mad?—speak!" said the Imam louder than before.

"*Kiupek!—Giaour;*—dog! infidel!" whispered the other.

At length, all of a sudden, as if he had been bitten by a snake, he bounded off the sofa upon which he sat, and without looking either to the right or left, flung out of the room, leaving the man of the minaret in utter amazement at this unexampled feat.—All he could say was, "He is mad!," then straightway quitting the house, he proceeded to the Mufti, open-mouthed, with the intelligence.

The wretched Suleiman had sprung through the corridors in his way to the women's apartments, when he discovered that he had left his slippers behind him: this little circumstance most providentially broke the violence of his determination. A Turk never loses sight of his dignity; seeing his feet without their papouches, he slowly turned back to seek them, and by the time he had put them on, his his mind had in some measure turned also. First, he released the head of his dagger from his fast-clenched hand; then the fury of his wife's temper came to his thoughts, and acted as a check upon his own; and last of all, the charms of the unoffending Ayesha became present to his imagination, and very materially put to the rout that host of satanic impulses which were goading him on to crime and bloodshed.

With less precipitation and more uncertainty of purpose, he now proceeded to the harem. Raising the heavy curtain which hung over the door, the first objects he perceived were his wife and Ayesha, talking together with great earnestness. Upon seeing him, they retreated into the room before described, whither he followed them. In a manner totally unusual to him, and never before witnessed by his wife, he said "Woman! stand up and speak for yourself; you are a sinner, and if a sinner, God protect you!"

"What do you say, Suleiman Aga?" exclaimed Zabetta; "are you run out of your senses? I a sinner, indeed! What abomination are you eating? If I am a sinner, what are you?"

"This is no child's play, woman," said the angry man; "tell me, as you value your life, as you value that child whom you see there, what devilry has got into your head, that you should leave your husband and seek infidels for your company?"

Zabetta was not quite prepared for this, and as guilt is ever a coward, her usual prowess in an encounter with ner husband forsook her, and she turned pale. "I do not understand you," said she; "you are not a man if you come here with a lie in your mouth to oppress a woman."

"A lie, do you say?" exclaimed the Suleiman; "men do not dream when with their eyes wide open they see a Mussulman woman and an Infidel together; that has been seen this very evening: you are that woman, the Giaour at the next door is the man; do you call that a lie?"

"*Bé héy!*—what's this?" exclaimed Zabetta, regaining her assurance. "A lie! I do call it a lie; whoever said it is as great an oaf as you are, and that's much. Why do you bring your beard here to be laughed at? Go to the ass that sent you here, and tell him, 'I send him a bigger ass back in return.'"

"Woman!" said Suleiman sternly, his wrath rising with her impertinence, "your words are of no avail against proof. You have been seen this very evening, before the Azan, in company with the Frank Infidel: tell me plainly what happened, or, by Allah! the consequences will be fatal to you. Suleiman is not easily excited, but when he is, let me tell you it is time to place your trust in God—speak!"

Zabetta, seeing that the subject was too grave to be treated lightly, did not answer this question otherwise than by calling out to the black slave. "Mourzadeh," said she, "come hither; say where have I been all this evening until the Azan?" The girl's face, bearing marks of recent tears, and not in the least aware of the importance of the question, answered, "You were asleep the first part, you were flogging me the next, and then you said your prayers. What more can I say?"

"There," said the wife, turning round with exultation towards her husband, "till me after this that I was on the terrace with an Infidel. *Haif! Haif!* shame! shame!"

It should be added, in explanation of the tone of *Zabetta*, that she was completely the mistress of the house, and that poor *Suleiman* was one of those respectable characters, so numerous in Christian countries, and not unknown, it appears, among the many-wived Mussulmans—a hen-pecked husband.

HINTS TO PARENTS ON THE IMPORTANCE OF EARLY ATTENTION TO THE TEETH OF THEIR CHILDREN. 1 vol. 12mo. by *W. K. Northall*, Jr., Dentist. N. Y. *Goodrich & Wiley.*—A dentist giving advice how teeth may be best preserved, is certainly rendering a disinterested service to his fellow-citizens, since it is rather by their decay and destruction that he must make his living. Such a service is, nevertheless, rendered in this little volume, which points out forcibly the evil consequences of injudicious, and miscalled, kindness, on the part of parents, in neglecting to attend in early life to their children's teeth.

THE CHURCHMAN'S ALMANAC FOR 1835! New York Protestant Episcopal Press.—The thing that seems to have struck every one about this almanac, is the arrangement on the cover, of the Creed, in the form of a cross. We may add, that within, it contains much profitable knowledge. It seems like hurrying us on, however, rather rapidly in the career of life, thus to present us with an almanac for next year, when the present one is little more than half expired.

AN INQUIRY INTO THE CAUSES OF THE PUBLIC DISTRESS—pamphlet: reprinted, with corrections, from the American Quarterly Review. New York: *G. & C. & H. Carvill.*—This practical, sound, and well reasoned argument, to which we have before referred more than once in these columns, is now presented in a separate form, with some material errors, which occurred in the haste of printing in the Quarterly, corrected, and with some additions. Of the latter, the following statement of the condition of the Bank of the United States on the 1st inst. will be deemed interesting.

Specie on hand,			$12,823,997
Funds in Europe,			3,750,242
Balances from State Banks, and State Bank notes on hand,			1,973,283
			$18,547,592
Nett circulation,			$16,641,997
Deposites,	Public,	2,675,433	
	Private,	6,735,869	
			9,411,303
			$26,053,301

That is to say, the Bank of the United States, which the Government has discarded as a fiscal agent, has *two dollars* of specie, or equal to specie, to redeem *three dollars* of debt.

PUBLIC DOCUMENTS, 23d CONGRESS, 1st Session; 1 vol. 8vo. New York, *Minor & Challis.*—A volume this of nearly 900 pages, of double columns, comprising all the principal documents and leading speeches connected with the last session of Congress—in some respects, possibly, the most important session held since the adoption of the Constitution. The whole for $3!

To render it more specially valuable as a book of reference to New Yorkers, it has, in an Appendix, the Governor's opening message, his special Message about the six million loan, the Act for that loan, the report of the Bank Commissioners, &c. &c.

We hope the encouragement that may be extended to this publication, will induce the publishers to continue it habitually during the sessions of Congress.

A correspondent, under the initials C. R. G. points

out to our notice, the second article in the last No. of the New England Magazine, as of a tendency to render that periodical unworthy of the praise which certainly has been bestowed upon it in our columns; and which, after such a paper as "the Thoughts on Optimism," we hope will not be repeated. We have not the number at hand, and have not read the paper referred to, but if it is of the character described by our correspondent, it should, and undoubtedly will, detract from the favor with which that periodical has been heretofore received.

We are glad to find in the Buffalo Whig, a new paper, which we had occasion to welcome to our editorial table a week or two since, a very favorable notice of Dr. Metcalfe's "New Theory of Terrestrial Magnetism," a work which we thought, at the time it appeared, would attract much attention, but which, since our original notice, we do not recollect to have seen mentioned. The essay is divided into two parts.

"In the first," says the author, "we endeavor to show, that capillary and cohesive attraction are owing to the unequal distribution of caloric, and to its attraction for ponderable matter—that the attraction of distant masses of vapor, by mountains, clouds, &c. is owing to the same cause, operating on a large scale." In this subdivision, also, the author treats at large upon atmospheric electricity, galvanic electricity, and light, of every description, from the rays of a candle to the solar beams, as *identical* with caloric. This puts out of views the theory of two varieties of electricity; and in place of the frequent distinctions of *positive* and *negative* electricity, he considers it, as did Franklin, but one substance, varied in its effects by the *quantity* present. Upon the identity of heat and electricity, he proceeds "to show that they are radically the same subtle, imponderable, and all-pervading element; and that its unequal distribution throughout nature, is the cause of all the various powers and attractions of ponderable matter with which we are acquainted. A complete history of caloric would embrace an account of all the changes and transmutations perpetually going on throughout matter. It is the grand instrument of the Almighty, by which he executes the laws of nature. It is caleric thunders in the heavens, as the voice of Omnipotence, which raises mountains from the ocean, and piles them, like turrets, in the sky. It expands in the deeps below, and the earth trembles; rocks are melted, and pyramids of flame ascend above the clouds."

The author's explanation of the *aurora borealis*, or northern lights, is at once clear, simple and satisfactory. We quote: "It is a well-known law, that all matter gives out caloric, in passing from a rarer to a denser state; and we know that the density of he atmosphere greatly increases as we advance from the lower to the higher latitudes. We also know that the atmosphere, like all other bodies, owes its bulk to caloric. Hence it follows, that caloric must be given out by the atmosphere, as it passes from a rarer to a denser state." Premising thus much, the author proceeds to the explanation of the cause and manner of production of the aurora borealis, which has so often baffled the philosopher, and so often engendered fears and fables in the minds of the multitude. "It is highly probable!" (page 43) "that the aurorae are formed in the upper and rarified regions of the atmosphere—and that the different apparent heights of the columns are owing to their different distances from the point of observation. It is worthy of notice, that the northern lights are most numerous and vivid during the long polar nights, while the cold is most intense, when the upper current from the equator, in its passage to the poll, is greatly condensed; and that they are then exhibited in much lower latitudes than during summer." In proof of the positions assumed many facts are adduced. Captains Scoresby, Parry, and others, when in high northern latitudes, most frequently saw the aurorae *south* of them, and on the line bounding the region of *extreme* cold—and where, if this theory be admitted, they could only be formed, as there the warm air from the equator, in passing north, would be condensed so as to give out its heat and light. North of this, in the region of perpetually severe cold, thunder and lightning are unknown—and for the same reason. To the question which would very naturally arise, namely, why all this expulsion of heat does not modify the rigors of the polar climate, we find (page 43) the following very satisfactory answer:—"Notwithstanding the amount of coloric given out by the upper equatorial currents, as they pass to the poles, very little effect is produced by it, in moderating the climate, as it *escapes into the regions above*—where, not being compressed by the atmosphere, it expands *like the electrick spark in an* EXHAUSTED *tube*, into broad bands or zones and columns—filling the sky with halos, or crowns of lambent light or undulating coruscations."

GREENOUGH'S STATUE OF WASHINGTON.—Our readers, as well as ourselves, are very much indebted to Mr. Morse, for furnishing for publication the annexed capital letter of his accomplished friend GREENOUGH. The forcible observations it contains were suggested chiefly by some remarks which appeared in these columns several months since, on "the design of the Statue of Washington, which Greenough the sculptor had adopted." These remarks were called forth by an extract of a letter from that distinguished young artist to Mr. Morse, which was published in the Journal of Commerce.

"In answering Greenough's letter," says Mr. Morse, "I sent him a copy of your Journal, containing the remarks, and although differing generally from the critic, I seconded his opinion in respect to substituting the book of the *Constitution* for the *Sword*. I have just received a letter, with some valuable thoughts on the nature of his Art; and as the principal remarks on the subject were spread before that portion of the public who read your Journal, I have thought it but just to your readers and to Greenough that you should have the opportunity first, if you thought fit, to publish his letter."

We again repeat, that we are much indebted to Mr. Morse for an opportunity of presenting our readers with such a characteristic letter, by a master of his art, and which contains some comments that, apart from their immediate application, have a very significant bearing upon a much disputed point of taste. The proper costume of an historical portrait, whether in marble, or upon canvass, is a matter that, we apprehend, will alway remain unsettled; but we do not remember having seen the classical side of the question put more strongly, than by the distinction drawn by Greenough between the proper mode of representing such men as Howard, or Fulton, or Watt, "or any other simple improver of the arts or institutions of society," and of depicting characters of the heroic mould. The delightful essays of Sir Joshua Reynolds, wherein he dwells so often upon this subject, and in the preparation of which he is supposed to have been aided by the strong common-sense views of Johnson, and the elegant taste of Burke, supply, to the best of our recollection, no more valuable hint upon the subject. Sir Joshua indeed went so far in his love of classic figures, that when West was painting Wolf's storming of Quebec, he could hardly be prevailed to look upon an historical picture where the British uniform was introduced; nor was it till the severe pencil of another artist, engaged upon the same subject, had raised a general laugh by representing officers whose faces were familiar to the public, going *paris naturalibus* into an engagement, that Reynolds withdrew his countenance from the scholarly Englishman, to bestow it upon the daring young American—daring, because he had broken through the most received rules of art, in the very presence of its highest minister. And who will say that West was not right? For, apart from the inherent absurdity of representing a battalion of modern infantry in the guise of "a Macedonian Phalanx," for instance, the complexion of their costume is really an historical feature in an historical picture. Strike the distinguishing insignia of Bonaparte's Cuirassiers or his Imperial Guard from the actions in which they figure, and you may dispense with the little cocked hat himself. But it is very different with the portrait of a single individual. It is a likeness there, and not an event that you record. It would be alike ridiculous to represent Napoleon seating Marie Louise beside him on the throne of Charlemagne, either in the dress of the Gothic Emperor's time, or in a state of classic nudity. But no one would be shocked with an undraped bust of the Austrian prineess, nor would the iron crown of the conquering Charles misbecome an effigy of his warlike successor.

But we are dwelling too long upon this distinction between characters and scenes, which being lost sight of by so many writers upon art, has occasioned so much confusion in their views. In the effigy of a single individual, unless where the character, like that of William Penn, was identified with his dress, his counterfeit presentment should be made in that guise which is least offensive to the eye of taste.

We will be forgiven, fordetaining the reader so long upon the latter part of Mr. Greenough's letter, by allowing him to proceed at once to the sculptor's eloquent, and triumphant defence of his own original design. †

FLORENCE, MAY 24, 1834.

My Dear Morse: I am not displeased that my statue calls forth remarks; now is the time to hear and profit by them. I trust I shall be found open to conviction and desirous to learn; but I fear the making a statue of this kind, requires more attentive and instructed thought than most of our able men can spare from their occupations. I am pleased that the *artists* find my design significant. Your hint, or ratner Mr. King's hint, about the constitution, is surely valuable; and if the object of the statue were to *instruct* people about Washington it might have been anticipated by me. To put into his hand a scroll or a book would be easy; but as books are very like each other on the outside the meaning would be uncertain; and doubt in a statue is feebleness. We raise this monument because Washington's face and form are identified with the salvation of our continent. That sword, to which objections are made, cleared the ground where our political fabric was raised. I would remind our posterity that nothing but that, and that wielded for years with wisdom and strength, rescued our rights, and property, and lives from the most powerful as well as most *enlightened* nation of Europe. I look on the military career of Washington as being, though not perhaps *his* highest glory—*our* greatest obligation to him. I can conceive of his having died at the close of that struggle without any very bad consequences to our institutions. But a sword in the hand is an accessory which adds little to the *contents* in any way; in art it is important. If people would consider the abstract nature of sculpture—its elements—its limits—they would cease to look to it for information on points which are better explained by other arts in other ways. They would as soon expect to hear Washington's dress described in a 4th of July oration as to see it sculptured in an *epic* statue. It is to the *man* and not to the gentleman that we would do honor. To embody in the work the abstract of a political creed, or the principles of a political party, might ensure protection for my work just now. But just now I can do without it.—I am pleased that you and your friends think my composition, in the main, significant. Those who imagine that I would dress Washington in a Roman costume misunderstand me. The time is past when civilized nations are distinguished by their dress.—If the United States ever had a national garb, I can conceive patriotic zeal interested in its preservation. But what distinguished the dress of Washington from that of Peter, Leopold, or Voltaire, or Burke? In many statues the dress of the time is most useful. In a statue of Howard, or Fulton, or Watt, or any other simple improver of the arts or institutions of society, I should think it very proper then to mark the date of his career, by exhibiting him in that circle of usages which he merely served. But the man who overthrew a tyranny, and founded a Republic, was a hero. When he sits down in marble immortality in the Hall of the Capitol, his dress should have reference to the future rather than the past: there should be about him nothing mean and trifling, or above all, ridiculous; which latter adjective, I hold to apply in its full extent, to the modern dress generally, and to that of Washington's time particularly. Three statues have been made of Washington: one by Houdon, representing the General, made with every advantage, and with an accuracy of detail that will ensure it, in its way, the

first place among the representatives of the man: one by Canova, representing a Roman in the act of thinking what he shall write: one by Chantry, representing him holding a scroll in one hand and a piece of his cloak in the other. I have heard these statues, in their time, examined and criticized by the country. I find nothing in the interest they excite to tempt me to follow either. I choose to make another experiment. If it fails, the next sculptor who attempts the subject will have another beacon in this difficult navigation: the rocks will not increase: the sooner light-houses are on them the afer. Only don't send us landsmen for pilots. I am, my dear Morse, yours, H. Greenough.

SUMMARY.

Frederick Rapp.—This gentleman, who was extensively known in the West, as the principal man at Economy, Beaver county, Pennsylvania, died a few days since, after a lingering illness, in the sixtieth year of his age. He was a man of great enterprize and industry.—[Cinc. Gaz.]

It is an extraordinary circumstance, certainly, that *three times* within four days the New York Mail, and all beyond that Post Office, have entirely failed.—[Nat. Intel.]

Lieutenant Slidell, of the United States Navy, author of "A Year in Spain," has been presented, to the Queen of England, by the American Chargé.

The Buckeye.—This is the title of a new and handsome newspaper, the publication of which has been commenced by W. C. Jones & Co. at Chilicothe Ohio, at the cheap price of $1 50 per annum. It bears the following motto, from a discourse of Dr. Drake, delivered before a literary association in Cincinnati last fall: "The Buckeyes of the West—theirs is the only power which can permanently unite the Hemlock of the North with the Palmetto of the South in the same National Arbor"—The following editorial paragraph is full of good sense, from which—and we say it respectfully—many professors of religion might deduce a useful hint:—

"It is stated in some of the exchange papers, that 'upwards of two thousand dollars have been raised in Philadelphia and elsewhere, for the establishment of a high school at Athens in Greece; and it is proposed to form societies in this country to support common schools all over Greece.'

We cannot see the propriety of our citizens thus establishing societies and sending their money abroad, for the support of schools in other countries, while there are so many children in our own land, (where it is so highly necessary that *all* should be enlightened) without the means of procuring an education of the most ordinary kind. We are no enemies to the cause of education in Greece; on the contrary, we wish to see the lamp of knowledge lighted up in every clime; and more especially would we be pleased to see its general rays shed over old Greece, till she assumes more than her ancient splendor. But our countrymen should remember that "*charity begins at home;*" and until schools are established for the education of every child in the union, their philanthrophy should be confined to its more appropriate sphere. While any considerable portion of our population are left to grope their way through the mists of ignorance, the corrupt and intriguing politician will have influence; and there will be no real security for the permanence of our free form of government."

Avon Springs.—A very interesting account of these celebrated springs from the pen of Dr. Francis is contained in the last Mirror.

Periodicals in China.—According to the French papers, the taste for literature is on the increase even in China. A new daily literary paper, and a monthly review, have been established at Pekin.

Deaths in Philadilphia last week, 142. Consumption 9, Cholera Morbus 4, Diarrhœa 5, Summer Complaint 40, (all children,) drowned 5, intemperance 2.

The Earthquake at Santa Martha.—We have before us a letter from Santa Martha, South America, dated June 15th. One third of the houses had been thrown down by the late earthquake, and of the rest, a half were rendered uninhabitable. The church of San Domingo was demolished, and the tower of the Cathedral thrown down. Nine-tenths of the inhabitants had left the city. The desolation of its appearance was extreme. The shocks still continued up to the 25th. There had been seventy or eighty during the period of twenty two days—[Boston Transcript.]

From Mexico.—Capt. Rogers of schr. Flor del Mar, arrived on Friday from Vera Cruz, informs us that a private conducta with $400,000, had that day arrived from the interior. The great conducta had not left on account of the revolution. Gen. St. Anna was beseiging the city of Poibla, which was expected not to hold out much longer. Rumours were current at Vera Cruz, that Gen. St. Anna had met with a slight defeat at Poibla, he had however, rallied his troops and cut off the supplies of that city. The cry of the party now is, "Religion and Santa Anna!" who, it is reported, receives 80,000 dollars per month from the church and the aristocratic party, with which he appears to have united himself.

[*From the Daily Advertiser.*]

Latest from Buenos Ayres.—By the ship Brutus, Capt. Adams, we have received Buenos Ayres papers to the 14th June, from which we make the following extracts:—

Buenos Ayres.—All the news of the week will be found carefully detailed in our columns of this day; the most important part of which is the resignation of office tendered by the Government to the House of Representatives, on Thursday last. Such an event has been for some time expected, and the names of their successors have been also bruited. It is probable that our next number will contain the particulars of the appointment of a new Government.

We have not read the note of the Governor to the House; but we understand it states, that the Government had endeavored to conciliate all parties, and to attract as much as possible the support of the most influential persons: that success had not attended their efforts, therefore no other alternative remained but to resign office.

Catamarca.—Private accounts state that a change has taken place in the government of this Province, which was brought about by its House of Representatives, during the absence of the Governor at Tucuman. The details of this event are not known, or if serious consequences are likely to ensue therefrom.

Cordova.—It is reported that an invasion of this Province by the Chilian Indians, is likely to take place. It appears that the Government of Cordova have received official notice from Chili, that the Indians, in number about 2000 men, were preparing to pass the Cordillera. The Government of Chili have provided every means in their power to frustrate the intended incursion; and that of Cordova have taken measures to repel it, should it be put in practice.

Santa-Fe.—A Bulletin (No. 10) dated 4th instant, has been published by General Estanislao Lopez, Governor of the Province of Santa Fe, giving an account of further successes which he has obtained over the Indians.

Mendoza.—A despatch, dated 27th ult. has also been pulished from the Governor of Mendoza, (Pedro Molina,) detailing successes gained over a body of Indians who hovered around that Province.

Chili.—A mail from Chili arrived on Saturday last, by which we received the Mercurio of Valparaiso, to 16th ult. They contain no particular news as it regards that Republic, if we may except the fate of the convicts, whom we mentioned in a former number, had escaped from the island of Juan Fernandez, in the Chilian schooner Estrella. It appears that after quarrelling among themselves, one Idalgo got the upper hand, and put a number of his companions, with the women they had on board, in a launch, in order to land them on the coast between Cobija and Iquique; but it is supposed they perished on their voyage thither. Idalgo and others got on shore at Pisasqua, and proceeded into the interior with the passports of the individuals who were on board the Estrella when she was seized by the convicts, and who were left by them at Juan Fernandez.

Peru.—The news from Peru comes down to 1st March. The issue of the civil war in that country was thought to be somewhat doubtful, for although public opinion was against Gamarra, and he was regarded as a tyrant and the author of all the miseries of the country, yet he has a strong military force with him, and is likewise in possession of the departments of Junin, Cuzco, Puno, Ayacucho, &c.

The President (Orbegoso,) had been invested with extraordinary powers during the continuance of the civil war; and General Gamarra, Elespuru, Bermudez, J. M. Frias, and Vargas, had been struck off the army list. The same was to be practised against a number of other officers if they did not within a certain time present themselves to the legitimate authorities. In the mean time General Niete, Miller, Nescochea, and Plaza, at the head of their divisions, were actively exerting themselves in favor of the government of President Orbegoso, and had obtained some successes; and several emigrant Argentine officers who had served with General Lavalle, viz. Colonels Perdernera, Acha, Irigoyen, Terres, and others had taken service in favor of the legitimate authority; Acha and Irigoyen had been appointed aides-de-camp to Gen. Necochea.

Montevideo.—We have received journals of the above city to 2d inst. They contain an official despatch, dated Head Quarters, Cuareim, 16th ult., from the President of the Oriental Republic, (Fructuoso Rivera,) to General Oribe, Minister of War and Marine, at Montevideo; giving an account of the total defeat of General Lavalleja's force. The President states, that after incessant and laborious marches, he had on the 15th ult., at dawn of day, succeeded in surprizing the advanced posts of Lavalleja, consisting of Indians; that Lavalleja himself, with 80 to 100 men, was close at hand; but wishing to prevent the effusion of blood, a summons was sent to him to surrender; the officer who conveyed it, was, however, fired upon; therefore no alternative was left but immediate action. The President accordingly formed his troops, and attacked and routed the anarchists, who fled in all directions, leaving behind them a number killed, wounded, horses, &c. &c. General Lavalleja, and others, escaped &c. The President states that his loss in the encounter only consists of one killed and ten wounded; among the latter is Commandant Arellano, but not dangerously. The conduct of the Government troops is also highly eulogized.

The President, in a letter to his wife dated 21st ult,. says that the brother of General Lavalleja (Manuel Lavalleja,) was killed in the above action.

MINE OWN.

I need not token flowers to tell
How deeply dear thou art,
Still on my ear thine accents dwell,
Thy virtues in my heart;
Thy beauty floats before mine eyes
In soft, celestial light,
Alike at orient day's uprise
And pensive shut of night.

Although afar—although afar—
Yet art thou with me still,
When evening's star, and morning's star,
Gleams o'er the twilight hill;
Thy beauty streams thro' all my dreams,
The lone night watches through;
And cloudless skies recall thine eyes,
The archangel's tearless blue.

The sinking and the swelling heart
Of fond yet fearful love,
The bliss to meet, the pain to part,
It hath been ours to prove;
The wild embrace of blessedness,
By absence made more blest,
The separation's pangs, which press
Its life-blood from the breast.

But think not months, however long
(For long all months must be,
Theme of my blessings and my song:
Which sever me from thee)
Shall e'er undo one tender tie
Affection's fingers wove.
Shall make less deep the daily sigh
Which absence owes to love.

Farewell! thou shalt not be forgot,
My beautiful, *mine own!*
Oh, may the sorrow of our lot
Bow down my head alone,
And these dried flowers, which, given to me,
Were moist with morning rain,
Shall bloom of thee, and breathes of thee,
Until we meet again.

LOVE AND DEATH.

"Young Love and Death, by chance one night,
Stopped at a hut together,
While raged the storm with lurid light,
To shelter from the weather:
Love gave the host, with strict behest,
His darts to keep till morning;
Death, too, gave his, with looks—stern guest!—
Of future ills a warning.

Each to his chamber then retired:
But when the sun was peeping,
The Travellers of the host required
Their charge, left in his keeping:
The host complied; but, as we're told,
Too fatally mistaking,
Gave Death Love's arrows tipped with gold,
Young Love in turn Death's taking.

Whichever course the archers went,
They caused a sad confusion!
Old age, on whom Death's aim was bent,
Felt playful Love's delusion:
While victims maids and youths became,
Where luckless Cupid wandered!
Young hearts droop'd in a blighted frame,
And passion's bliss was squandered!

Love soon his fellow traveller met,
And straight with sobs and sighing,
Complained that all he'd aimed at yet
Were either dead or dying!
Said Death, "Dry up your tears poor boy!
Take back your own bright quiver,
And give me mine." Love did with joy—
They parted then for ever!"

FOREIGN INTELLIGENCE.

SIX DAYS LATER FROM EUROPE.—By the packet ship *Roscoe*, Captain Delano, we have received London papers to June 23d, and Liverpool to the 24th inclusive. By the *Rhone*, Captain Rocket, we have French papers to the 18th.

The Swiss Cantons have received insulting and threatening communications from the Austrian Cabinet, in consequence of their refusal to give up some German refugees to the vengeance of their despots. It is said that even an invasion of Switzerland is menaced.

In England, Parliament still advances, by gradual but determined steps, in its gigantic task of reform.

By a return just laid on the table of the House of Commons, it appears that in 1831, 1832 and 1833, twenty-eight vessels, the tonnage of which was 7,172, have carried cargoes of timber from the north of Europe to America, and have then reimported it into England. The cargoes were chiefly fir timber. In 1831 and 1832, there were only five vessels which made this roundabout voyage; and twenty-three made it in 1833.

PORTSMOUTH, JUNE 18.—Don Carlos, his consort, the princesses, and suite, landed this morning at half-past seven, under a salute, with manned yards, from his Majesty's ship Donegal, and on their landing were received under a salute from the batteries, and a guard of honour of the royal marines, under the command of Captain Menzies, R. N. The George Hotel, from the influx of strangers, not having sufficient accommodation, a spacious house next to the lieutenant-governor's has been hired for their reception, but how long they will sojourn here, or their ultimate destination, is unknown.

The elections for the lower House of the Cortes are to take place in Spain on the 30th June; it is believed the returns will show a stronger liberal vote than will be acceptable to the Court party.

The packet ship UTICA, Capt. DEPEYSTER, from Havre, whence she sailed on the 26th June, arrived here yesterday morning. We have received our regular files of Paris and Havre papers to the 24th and 25th inclusive. We are also indebted to Capt. Depeyster for Galignani's Messenger of the *Evening* of the 25th, and a London Price Current of 24th, from which the following extracts are taken:

The principal intelligence of interest relates to the result of the recent elections of members of the Chamber of Deputies. The result was a great ministerial triumph, 270 Deputies out of 320 having been returned in their favor. Among the unsuccessful candidates were several of the most important members of the opposition in the last Chamber — The papers contain the names of the newly elected Delegates.

Louis Philippe will visit Toulon in July.

The nobility of the Roman States, with several princes at their head, have presented a petition to the Pope, complaining of the enormity of the land tax, and praying that this tax, the *Agno Romano*, should be estimated at 8,000,000 scudi, instead of its present amount of 12,000,000 scudi.

A letter from Rome, dated the 13th inst., states that Torlonia's house has just received a privilege for the establishment of steam-coaches between that city and Naples.

The *Austrian Observer* states that it has received a letter from Sesla Nova, dated 14th May, announcing that the Island of Samos has completely submitted, but does not take upon itself to guarantee the correctness of the fact, though the same intelligence has been communicated to several Consuls by their agents.

The *Moniteur Algérien* of 10th inst. states, that a regular correspondence between Algiers and the other ports of the Regency is about to be established by means of steam-boats, which were expected to commence their voyages on the 15th. It also promulgates two Orders of the Day, one for protecting the property of the natives and others, during the season of gathering in the fruits of the earth; and the other, prescribing the precautions to be taken by the troops during the continuance of the great heat, and directs that no soldier shall leave the barracks, except in cases of absolute necessity, between ten in the morning and four in the afternoon. All the men engaged in working parties go out at four in the morning and remain till half-past five, when there is great emergency, but not otherwise.

[*From the Journal of Commerce.*]

ONE DAY LATER FROM LONDON.—By the packet ship Samson, Capt. Chadwick, we have received a London paper to June 24th.

LONDON, JUNE 24.

City—Monday Evening.—Since the morning, we have received no addition to the political information from the Continent and the Peninsula. Money has been more difficult to-day, and the apathy of speculation in the British funds is said to be mainly caused by the want of confidence in the pending measures of the present ministry.

It will also be seen, that the foreign market equally partakes of the gloom of the British, and the rage for speculation is suspended.

Great Protestant Meeting.—We are authorized to state that a general meeting of the Protestants of Ireland will be held in the city of Dublin in the 1st week of July—the week after next, attended with circumstances of such a character as must insure the attendance of gentlemen of the most remote provinces in the kingdom. Subjects will be discussed and resolutions be adopted—sentiments be uttered and speakers present themselves calculated to inspire our friends with hope—to fill our implacable foes with consternation and dismay. Brighter and happier days are in prospect for us; and we hope in our next to be able to give the requisition, and to go somewhat into the detail of the particulars at which we only at present glance; but we make this announcement for the purpose of giving our friends timely notice, so that they may make their arrangements for being present.—[Dublin Evening Mail.]

Health of the Metropolis.—During the last few days diarrhœa has been unusually prevalent, and there is reason to apprehend, from the early appearance of this disease, that Cholera may again visit us. Bowel complaints are common at the end of summer or beginning of autumn, but are very rare in May. The disease now prevalent is preceded by indigestion, langour and lassitude, sinking at the pit of the stomach, and great debility; in fact, the symptoms which preceded Cholera in the years 1832 and 1833. Ordinary methods arrest it, and the timely application is indispensible. Regularity of living, nutritious diet, and moderate mental and corporeal exertion are the best preventatives.—Vegetable food, more especially salads, lettuce, &c. ought to be used sparingly, if at all.—[London Medical and Surgical Journal.]

Several engineers have arrived at St. Omer to prepare the plans for a Railroad between Paris and Lisle, with a branch to Dunkirk.

BERLIN, June 16.—A Dantzic timber merchant is gone to Poland, to purchase large quantities of timber. Orders have been received for 2000 wooden houses to be taken to pieces and embarked at Dantzic for Toulon, and thence to Algiers, to be employed in building a new town or suburb. The entire stock of zinc here, even that which has just arrived, has been bought up at a high price for the Russian Government.

The celebrated navigator Captain Ross proceeded, in May last, to Sweden and Norway, in order to have some ships built of *deal*, the pliability of this material being important for the new voyage which he has undertaken to the Polar regions.

Arctic Land Expedition.

Despatches were received yesterday morning by the Royal Geographical Society from Captain Back, and the following extracts, containing the most interesting portions of his narrative, are published for the information of the public. It is gratifying to observe the good spirits in which he writes, and the entire success of the preliminary operations:

Fort Reliance, East-end of Great Slave Lake, December 7th, 1833

I overtook Mr. King at Cumberland-house, and got him fairly off, with the two boats heavily laden with 123 packages of 90lb. each, by the 7th of June.

The accounts I had received from different persons of the low state of the water in some of the rivers, foreboded considerable detention to the boats; and, other circumstances considered, it was evident to me that they could not reach the eastern end of Slave Lake before the commencement of cold weather. Giving up all hope of seeing them again before the accomplishment of my plans I stimulated my crew to the utmost, and actually worked them, until my arrival at Fort Chippewayan, which was about the end of July, for 18 hours a day. On my route I met Mr. McLeod, an old acquaintance of mine, and for whom I had a letter from the resident Governor, Mr. Simpson, intimating a wish that he should accompany the expedition; and I am sure you will be happy to learn that he immediately consented to place himself under my orders, and undertake the management of the Indians at our winter quarters.

On our reaching Fort Chippewayan, we made every inquiry relating to the direction of the rivers that debouched at or about the Fond du Lac, and though there evidently appeared to be a nearer way to the Barren Grounds than by the circuitous one originally intended to be followed, yet the vague and unsatisfactory answers of the Indians, together with their obvious ignorance of the distance to the Great Fish River, made me at once decide to go by Great Slave Lake.

It was the 7th of August when we landed at Fort Resolution, owing to the detentions incurred by sending to the Salt Plains, (a little to the westward to the Slave River) for a winter's stock of that invaluable article.

Many Indians were assembled at this trading post, and their Chief, Le Grand Jeune Homme, was waiting my arrival, under a sort of promise held out to him that he should accompany me. But as I was fully aware that his services must be purchased at a greater rate than our limited means could afford, and that he knew nothing about the country to the eastward, I was glad to compromise the affair, and reward him for his loss of time by a present of the value of 40 beaver skins.

The season was advancing too fast to admit of any more delay, and being unable to procure a guide to the Thlew-ee-cho-dezeth from among the Indians, not one of whom possessed a knowledge of its locality or direction, I determined on leaving Mr. M'Leod to bring the stores, while I preceded him in a half sized canoe, with a crew of two 'half breeds,' a Canadian, an Indian, and an Englishman. With this motley and most rickety craft I commenced the survey towards the north east. Our course first lay in the direction of the Riviere a Jean, and along the low swampy shores of the lake, then across to numerous islands, which led us to the north side of the lake. The scenery there was composed of the most craggy and picturesque rocks—mostly primitive, and consisting of flesh-colored feldspar and quartz, with a few trees of inconsiderable size.

As we advanced, the appearance became more imposing, from the circumstance of the granite, or rather the last formation, yielding to the trap, which displayed itself in long parallel ranges of natural precipices, that not unfrequently extended to the horizon.

In two places the southern shore approaches within a mile of the northern, and the detroits thus formed have never been known to freeze.

More than one island had a columner or basaltic form on the precipitous or south-west side. The water, unlike the turbid yellow we had left, was now of transparent blue, and so cold that ice often formed during the night.

I had now got to lat. 62 deg. 51 min. 40 sec. N., and long. 109 deg. 25 min. W., and could perceive a long blue point stretching to the S. E. which my Indian said we must round, or make a portage to get to the eastern extremity of Great Slave Lake. 'There,' continued he, 'you will find a river which [I know not what the Great Chief may do but] we who are born here cannot ascend.' Upon further inquiry I found he was right, and that some time would be saved by taking a more indirect course, which could only be effected by following the uncertain trending of the stream that he called 'Hoar Frost River.'—On our rounding a point, this presented itself in a cataract of 70 feet descent, and discouraging as this was, and still more so the range of mountains through which it forced its passage, we commenced the operation of transporting the canoe and baggage over hill and valley, full 1700 feet, the greatest difficulty consisting in conveying the canoe through the fallen and entangled wood. The numerous rapids in the river annoyed and delayed us; but the next day we passed the last woods, and entered a large lake in the barren grounds. The lat. of its southern extremity is 63 deg. 24 min. 33 sec. N., long. 108 deg. 11 min. W., or a little to the northward of the Chesadawd Lake of Hearne, which, however, is not known by the natives.

In making a succession of portages from lake to lake, I crossed the same traveller's line of route, and fell on a lake of such magnitude as to be bounded on the E. by E. by the horizon. In a N. E. direction it led us to a river, which we went up, and again launched the canoe on another extensive sheet of water. We were bewildered several times among

the islands and deep bays, still I kept going to the N. E. in which direction I was the more assured the river must be, from the general flatness of the surrounding land, and particularly from the north west dip of a few sand hills that were occasionally seen to the northward.

After being 3 days on the same lake, I encamped on some sand-hills at the bottom of the bay, and despatched the men in two parties to look for the Thlew-ee-cho-dezeth, the source of which I accidentally discovered while occupied in taking some angles from the summit of a hill.

On the third day the people returned, having fallen on the river at some distance from us. The canoe was immediately carried to its stream, which is narrow in some parts, and connected with a chain of small lakes by detroits and rapids. I could not forget giving my poor voyageurs a glass of grog on this occasion, after which grateful ceremony we pursued the meanderings of the current, sometimes with ice on each bank, till the 1st of September, when my little canoe was so shattered, the nights were so cold, the country totally destitute of wood, and the men fairly exhausted, that I could not with any degree of prudence incur further risk this season.

"The place whence I returned is in latitude 62 deg. 41 min. N., and longitude 108 13 min. W., about 115 miles E. of Fort Enterprize, and only 109 miles from the nearest part of Bathurst Inlet.

We had been fourteen days without wood, and on the 5th of September got to the first dwarf pines, about two feet high, and on the 7th concluded the journey, by arriving at the east end of the Great Slave Lake, where I had previously directed Mr. M'Leod to commence the building of our establishment.

The two boats under Mr. King got to us exactly a week after, and it is satisfactory to state, that most of the stores, &c. were undamaged.

Our winter house I have called "Fort Reliance," from a feeling of dependence on that Providence which will support us amidst every trial to which we may be exposed. It is situated on a sandy point in a deep bay, which receives two small rapid streams from the northward, and is surrounded by mountains and red micéous granite and gneiss.

"Fort Reliance is in lat. 62 deg. 48 min. 15 sec. N., and long. 109 deg. 10 min. W. the variation of the needle being 25 deg. 41 min. E. and considering this and the entrance of the Mackenzie River as the two extremes of the Great Slave Lake it will be found to equal Lake Michigan in length and may therefore be considered as the second largest lake in America.

"I have a very compact observatory built where the needle is performing its diurnal functions with more or less regularity, according to the appearance of the aurora, or other atmospheric phenomena. The dip, magnetic force, &c. have also been ascertained; nor am I conscious of having omitted any thing that the friends and projectors of the scientific part of this expedition may have expected from me."

[*From the Daily Advertiser.*]

TWO DAYS LATER FROM EUROPE.—By the ship Jubilee, we have received files of papers to the day of sailing, the 25th June, inclusive, which were politely furnished us by Capt. Luce. to whom we are indebted; as also to Capt. Pennoyer, of the steam packet William Gibbons, for his kindness in towing up our news-boat, thereby putting us in possession of this news some hours earlier than we otherwise could have obtained it.

A treaty of commerce has been concluded between Hanover and Brunswick, to which Oldenburg, Mecklenburg, and the Hanse Towns are invited to accede. This alliance would form a sort of counterpoise to the Prussian system of Customs.

In Parliament, June 23, Mr. Shiel inquired whether government had taken any precaution to avert the consequences of that famine with which Ireland was threatened. Mr. Littleton replied that inquiry had been instituted, and he had the gratification of stating that the distress was by no means so general as it appeared to be.

The accounts from Calcutta have been anticipated, and the same may be said of those from Sydney, to the 8th of February; they, however, state that the quantity of wool ready for shipment to England was then very great. Indeed there was enough for all the shipping lying out there, provided they had sufficient dead weight to carry. Thus every arrival brings some indication of the value of these colonies, and points out unerringly the advantage of cultivating a future home, or rather international trade with colonies whose very distance to a maritime Power adds more to their useful importance, and will, perhaps, add more to the national wealth and power than all the steam, and railroad schemes in projection.

We have received a file of the Tasmanian, which gives an interesting account of the most important discoveries in the South Pacific Ocean, by Captain Briscoe, of the brig Tula, accompanied by the Lively cutter. It is supposed that the land discovered forms part of a great Continent, extending from about long. 47 31 E., to long, 69 29 W., or from the Longitude of Madagascar round the whole of the South Pacific Ocean, as far as the longitude of Cape Horn. Captain Briscoe is said to have clearly discerned the black peaks of mountains above the snow, but was prevented by the state of the weather, and the ice, from approaching nearer than about 30 miles. The stormy patrel was the only bird seen. Captain Briscoe named the land Enderby's Land, in long 47 31 E lat 51 30 S. An extent of about 300 miles, was seen. The range of mountains, was E S E. Captain Briscoe subsequently discovered land to the S E, in long 49 29 lat 67 15, which is found to be an island near the headland of what was supposed to be the Southern Continent. On the Island, about four miles from the shore, was a high peak, and some smaller ones. About one-third of its height was covered with a thin scattering of snow, and two-thirds were composed of snow and ice.—This Island Captain Briscoe named Adelaide Island, in honor of her Majesty. Mountains were seen to the South, at a great distance inland, supposed about 90 miles. Captain Briscoe landed in a spacious bay on the mainland; and took possession in the name of his Majesty King William IV. The appearance of the Island was one of utter desolation, there being no vestige either of animal or vegetable life.—[London Morning Herald.]

The wool trade in Germany has lately been carried to a very extraordinary pitch. At Stettin, there were brought to market 18 000 quintals in one day.—The prices are higher, attributed to the new German system of customs.

In the night of the 18th inst. a barn in the small town of Hutwyl, in Switzerland, was struck with lightning, and the flames spread so rapidly that in the space of two hours, twenty-eight houses, two hotels, the town-house, the church, and the parsonage, with other buildings, making in all no fewer than forty, were entirely destroyed, depriving 370 persons of their homes and furniture. Happily no lives were lost. The bells of the church were melted.

FRANCE.—The ministeral majority in the Chambers will be overwhelming, caused by the rapid march of the government to absolutism, and the immense power it is wielding.

It was reported in Paris, that the Duc de Bassano [Maret] would be appionted Gov. Gen. of Algiers.—M. Lafitte had been elected Deputy for two places, Bourbon-Vandee and Rouen.

The municipal authorities of Calais have determined to light that town with gas.

At Bordeaux, on Saturday, the thermometer rose to nearly 30 deg. above zero of Reaumur, or 99 1-2 of Fahrenheit.

Liberalism was on the increase at Madrid, and all was quiet at Lisbon.

In Spain two Royal orders have appeared, one dissolving a body called the Diputacion de los Reinos, which was a nominal permanent Parliament of the Representatives of the several provinces, but whose office is now to merge in that of the approaching Cortes; and the other containing some regulations for the Church, with regard to the appointment of Vicars, which proves, if it does nothing else, that a watchful eye is to be maintained on that overgrown establishment.

Letters from Odessa express fears that the next harvest will not be abundant.

There have been great rejoicings at Constantinople, on the occasion of the marriage of the princess Saliha.

A Bad Speculation.—The Conservative capitalists who lent their money to Don Miguel, are likely to lose every farthing of it. They made the loans after receiving due warning from the Queen's government that they would never be paid, and as the whole of the money has been spent in carrying on the war against her, they can hardly expect that she will pay for the cannon, powder, and bullets, with which her soldiers have been despatched. The loans will, therefore, be a total loss.

The Duke of Richmond is engaged in a suit of importance in the French Courts. It appears that a number of the French connexions of his family claim that the estate of Aubigny should be divided amongst them, in conformity with the French law of 1792, which abolished the rights of primogeniture. On the other hand, it is contended for the Duke, that his title was expressly recognized in the treaties of 1814 and 1815; and that this estate is therefore exempt from the laws which govern the descent of real property generally in France. The judgment of the Court will be given in a few days.

During 1833, the linen cloths exported from Belgium amounted in value to 15,446,660fr., of which 14,505,037fr. were sent to France. The exportation of flax and hemp amounted to 518,162 kilogrammes, of which 438,142 kilogrammes went to England.

John Fuller.—This eccentric gentleman died at his house, Rose-Hill, in the county of Sussex, which county he represented during several successive Parliaments, for a period of more than twenty years, and was made celebrated by a well known scene in the House of Commons, when he called the Speaker "a little insignificant fellow in a wig," for which he was committed to the custody of the Sergeant-at-Arms. He was distinguished throughout life by much eccentricity, mingled with a kind heart, that displayed itself in actions of princely munificence.

Mr. Fuller died extremely rich. The bulk of his fortune, consisting of estates in Sussex and in the island of Jamaica, are left to Augustus Elliot Fuller, Esq., brother to Capt. Fuller, R. N. and a nephew of the deceased, as also of Lord Heathfield. The estates in London are left to Sir Peregrine Acland, another nephew; besides which, there are numerous legacies.

The following anecdote of Mr. Fuller, which may be relied on, is not generally known:—During Mr. Pitt's administration, a messenger arrived at Rose Hill with the offer of a peerage, on the condition that Mr. Fuller should vote in a particular manner on some question of the day. Mr. Fuller, who at the moment had a large party of friends assembled at his dinner-table, directed the messenger to be ushered into the dining-room to receive his answer. In his presence, and that of his guests, Mr. Fuller threw the letter into the fire, telling the messenger, at the same time, to acquaint the Minister with the manner in which his offer had been received, and adding, "I was born Jack Fuller, and Jack Fuller I will die."

Mr. Fuller stood successfully a severely contested election with Colonel Sergisson, which lasted sixteen days, and cost the former 20,000*l.*, in addition to a subscription purse of 30,000*l.*, made by the county. The expenses incurred by Mr. Sergisson were, we believe, equally heavy.

Medical Responsibility in France.—The Visigoths had a law, that if a physician were called in to a case, and took charge of it, he was bound to effect a cure. If the patient died, the physician was immediately delivered up to the friends of the deceased, that they might do what they liked with him. Some of the French journalists complain piteously that the laws affecting the profession in France at the present day are not less severe. A case lately occurred at Evreux, in which a M. Thouret Noroy, in consequence of alleged malpractice, by accidentally injuring the brachial artery, so as to render amputation necessary, was mulcted in heavy damages; and having appealed to a higher tribunal, had 400fr. more laid on him, by way of interest on his former fine.—[Medical Gazette.]

Shower of Sulphur.—By a letter from Rodelheim, near Frankfort, of the 3d May, we hear of the following:—It rained brimstone. During a heavy fall of water, such a quantity of sulphur fell in combination with it, that as the water flowed down the streets the surface was covered with it, and quantities of sulphur were gathered from the pavement.—[St. Petersburgh paper.]

Grecian Antiquities.—The Munich Gazette says—"There has been discovered on the ground where the battle of Cheronea was fought the colossal lion which the Thebans erected on the spot, in memory of their fellow citizens who died in defence of their country. This monument will, it is said, be restored. Several other relics of antiquity have been found at Zea Knydos and Denos, and deposited in the Museum at Greece. Among the objects found at Zea is a bust with this inscription—'Epithalamium of Sophocles the Heraclian.'"

Steam.—At the rate at which the splendid new steamboat Dundee performed its first voyage from Dundee to London and back again, the distance being nine hundred miles, it would be possible to cross the Atlantic and reach New York in between nine and 10 days. The Dundee registers 1200 tons, and her engines are of 300 horse power. We believe that she is the largest and finest steam ship ever built.

A few days ago the workmen engaged in the alterations in Hinchingbrook House, uncovered two stone coffins, containing human bones; the skeleton in one of them was quite perfect from the head to the hips, but in the other the bones were displaced and scattered about the coffin, having probably been opened nearly a century ago, during the progress of some repairs, when the lower part of the other skeleton was most likely destroyed or taken away. There were no figures or inscription on the coffins, but there can be little doubt that the remains are those of two of the prioresses attached to the Nunnery previously to the dissolution of Religious Houses in 1586, and the spot in which they were found, it is supposed, then formed part of the cloisters. The coffins are cut out of solid stones, one having a circular, and the other an elliptical place for the head, and running taper from the shoulders to the feet, the width at the head being 2 feet 4 inches, and only 1 foot at the other end; and they must have been interred, on the most moderate calculation, nearly 500 years, and probably some centuries longer. After a sketch of the coffins and skeleton (which is that of a very small figure) had been taken, they were again carefully re-deposited in their ancient resting place. —[Cambridge Chronicle.]

Fashionable Bankruptcy.—MEETING OF CREDITORS.—A meeting of the creditors of Sir W. Anstruther, Bart., took place on Thursday last; and a spacious meeting it was! It will be recollected that Captain Anstruther, formerly of the Guards, became so reduced by his fashionable and expensive follies, that he for some years subsisted by playing at the Margate and other provincial theatres, under the name of Beresford, on £1 per week. The accidental death of his nephew, a boy at Eton, suddenly elevated him to the Baronetcy, with a fortune of £14,000 per annum, and sundry personals. This unexpected freak of fortune occurred about three years since; and, will it be believed, that in six-and-thirty months the Baronet has contrived to dissipate nearly his whole rental, and also enthral himself with £60,000 of bill and bond debts, besides the simple contract debts. Out of this wreck, all that is now left for Sir W. Anstruther's creditors is £2400 per annum scarcely enough to pay the interest on the bills; and out of this he wishes his creditors to allow him £1000 per annum. His personal effects at Westraw House, Scotland, may, it is said, produce about ten or twelve thousand pounds more; and this is all the creditors can hope for.—[Eng. paper.]

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily*, *Tri-Weekly*, and *Semi-Weekly*. either or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street*, *Albany*.

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee*, *May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.
J31 6t

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabethstreet, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examin these Cars; a specimen of which may be seen on that part o he New-York and Harlæm Railroad, now in operation.
J 15 tf

RAILROAD CAR WHEELS, BOXES AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS,

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of Distinguished scientific attainments.

To Ewin & Hearttе.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Hearttе—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possesion and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m25

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.
December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, *Flat Bars* in lengths of 14 to 15 feet counter sunk
200 do. 1½ do. ¼ do. holes, ends cut at
40 do. 1¼ do. ¼ do. an angle of 45 degrees with splicing plates, nails to suit.
800 do. 2 do. ¼ do.
800 do. 2½ do. ¼ do.
soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2½, 2¾, 2¼, 3, 3½, 3¾, and 3¼ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norriet. Railroad
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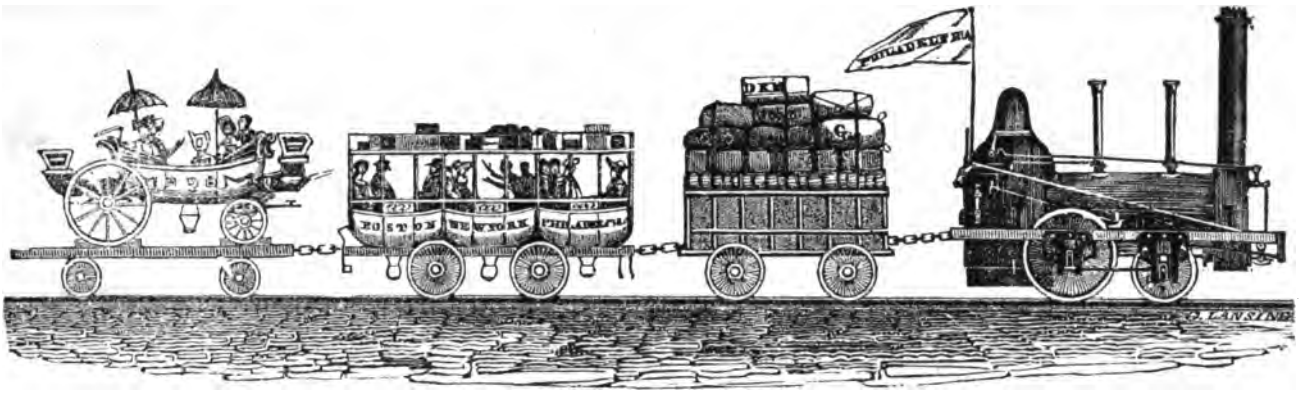

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, AUGUST 9, 1834. [VOLUME III.—No. 31.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, AUGUST 9, 1834.

Improved Wheels for Railroad Cars.—We have in our possession, which may be seen at any time, a piece of the *rim* of a Railroad *Car Wheel*, made upon a plan which we think will prevent accidents which sometimes occur from the failure or breaking of a wheel, when going at high speed. The wheel is entirely of cast iron, except a hoop of half inch *wrought iron* wire, enclosed or *cast in* the *rim* of the wheel, and which, even in case of the fracture of the cast iron, prevents the wheel from falling apart until another can be supplied. It serves also to produce an equal *chill*, or degree of hardness, in the cast iron, which, we are told, has heretofore been difficult to attain, in consequence of the increased thickness, or body of material, at the curve forming the flange—the point where this rod, or hoop, is enclosed—and thereby prevents the more rapid wear of that, than the other part of the rim. The introduction of this wrought iron must, we think, produce beneficial results, unless it should, as it may in some instances, produce imperfection in the cast iron; to detect which, should it exist, the wheel must in all cases be subjected to a severe test.

The part left at this office is of a wheel broken with a sledge, to test its utility. The cast iron was broken in many places, yet the wheel kept its shape, and could only be separated by cutting the rod with a cold chisel—which had, in the operation of casting, become annealed.

We find, on reference to the last annual report of the President of the Baltimore and Ohio Railroad Co. that they have been introduced on that road, and are thus spoken of by him: "Besides the improvements in the locomotive engine, others have been made in the machinery used by the company, and particularly in the construction of the wheels of the cars—by which an iron rod is introduced into the wheel when cast, which not only adds to the hardness of the surface, by perfecting the chill, but increases, in a great degree, the safety of the wheel itself."

With such testimony in its favor, we may, with great confidence, recommend it to railroad companies in want of wheels, either for passenger or freight cars, as we do, and would refer them to Mr. *Dean Walker*, care of Messrs. J. W. & E. Patterson, Baltimore.

Mr. Walker, we are informed, is the patentee and manufacturer, and offers to supply wheels of this description on as reasonable terms as they can be supplied without the rod, and also to have them proved before they are paid for.

Portsmouth and Roanoke Railroad, Va.—This road is now complete and in use 17 miles, to Suffolk. Passengers and freight pass daily on it. Horse power is used at present, yet so level is the route, that the distance is performed in about two hours and a quarter. The following is from a Norfolk paper of July 30th.

We invite attention to the notice in our advertising columns, respecting the running of the Cars on the Railroad between Portsmouth and Suffolk. The train is now in regular operation, and those who desire it may be gratified with a ride on the Railroad, without the inconvenience of a preliminary walk of a mile and a half to the depot, as carriages are in waiting at the ferry wharf in Portsmouth, every morning, at the proper hour, for the accommodation of passengers from Norfolk. The cars for the present are drawn by horses; but passengers are carried at a speed (in comparison with the swiftest travelling on the stage road) beyond all example. The distance is run in from two to two and a half hours, including stoppages.

New Route to Mobile and New-Orleans.—We have noticed that efforts were making to open a new and less difficult route for travellers between the Atlantic cities and Mobile, New-Orleans, and the far south, but were not until very recently aware of the precise route selected, nor of the means by which it is designed to be effected. We have now before us, however, a map of the route, and understand that it is the intention of some enterprising gentlemen to establish a line of steamboats from Savannah, Geo., to the head of navigation on Black Creek, a tributary to the river St. Johns, and another line from the head of navigation on the Santaffy or Santa Fe, (a tributary to the Suwanney or Little St. Johns, emptying into the Gulf of Mexico,) and Mobile, to be connected by a line of good stages between those two points, a distance of only 41 miles, and on an uncommonly favorable location for a road—indeed, the same route designated by the Government engineers for a canal.

The following extract will give a better view of the route. We shall refer to the subject again.

"Black Creek has a clear navigation of 17 miles, and probably higher up the river, and if so, the route of the Road will be shortened.

"The present circuitous road, from Ganey's to Summerlin's, is reputed to be from 50 to 56 miles. It is, besides, badly located, because, at the East, from Ganey's to Monroe's (15 miles,) passes through a region hilly, broken, scrubby, and sandy; whilst at the West, from Newmanville to Summerlin's, it passes through a region, 7 miles, of a hilly, broken, and rocky surface, unfavorable to the speed of stage coaches.

"Santaffy river is wider than Black creek, and has a navigable stream of 28 miles, by its windings from the Suwanney to the Natural Bridge, except in dry weather, when the waters are unusually low, and then to within two miles, where there is a slight obstruction of loose stones, which may be removed at little expense; and below this place, there is also some drift timber to be removed."

At the instance of the Mississippi and Atlantic Railroad Company, the Secretary of War has sent Col. Long, of the U. S. Civil Engineers, to examine into and report upon the practicability of a Rail road from Memphis, on the Mississippi, to Charleston, S. C. A part of the country which has been already examined, is said to be quite favorable for the construction of the work in question.

Swedish Roads.—The roads in Sweden are uncommonly beautiful and excellent. The surveyors never allow a stone to be used larger than a walnut. Their roads appear flat—but have a slight convexity. —[Knickerbocker.]

The following communication refers to a subject of much importance to this community—and it will probably attract the attention of those who are particularly engaged in the construction of railroads and railroad carriages. We hope soon to have a further account of these cars.

Bolivar, Ten., July 2, 1834.

To the Editor of the Railroad Journal.

Sir,—I am much obliged to you for the promptness with which you sent me your Jourarl for the last eleven or twelve months. I am much pleased with it; and, whenever an opportunity occurs, shall endeavor to induce others to add their names to your subscription list. I have glanced over the contents of these numbers with a view of finding something on the subject of railroad cars; but all attention seems to be absorbed in the improvement of locomotive engines, and the construction of roads, railing, &c., leaving out of view the car, the great connecting link in the chain of improvements. I will, therefore, introduce to the notice of the public, through the medium of your valuable journal, an improved car, possessing the following properties, viz.: 1st, Of carrying double the weight drawn by a horse or engine upon the ordinary car; 2d, of turning a curve with mathematical accuracy; 3d, of running more steadily and accurately upon a straight line than the common car; 4th, of possessing greater safety for passengers; and 5th, of being less liable to run off the rails. By the first of these improvements, a locomotive engine of three tons weight can transport a load which now requires a six-ton engine. By the second, a train of cars of any required number can pass a curve of large or small radius down to one hundred feet, with slight or no difference from the facility of following a straight line. The conical surface is not resorted to for this purpose. By the third, that see-sawing motion caused by "the self-adjusting conical wheel," in its constant effort to keep the axle in a line at right angles with the railing, or rather its tendency to deviate from that line, will be obviated.

I mention these results in order not to be misunderstood. I wish to state the effect and object, without aiming at any description of this car.

In making these statements I am fully aware how far I am falling in the way of incredulity, before the public have had an opportunity of witnessing the experiments, or of knowing the principles upon which they are founded; but I make them under a conviction based upon geometrical demonstration and mathematical estimate, combined with actual experiment, and therefore speak with a confidence derived from sure sources.

Any company wishing for this increase in the power of locomotion, and accuracy in the movement of the cars upon their road, by giving me official notice thereof, shall soon be satisfied that what I have said is no fiction; or, if I fail, the cost shall be all mine.

It may be proper to add that this car can be made as strong, as durable, as commodious, for freight or passengers, and, as I think, as cheap, as the ordinary car. I am not positive what the comparative cost of the two may be, but believe they will vary but little.

Your opinion, as well as that of experienced engineers, upon the utility of such an improvement, is respectfully solicited. Yours, &c,

S. Bailey.

The Rhine.—The scenery of Switzerland may now be reached in a few days, at a very moderate expense, and by a most beautiful route. The steam communication from London to Strasbourg is complete, and another line of steamboats forward the traveler to Basle. In the course of the voyage from London to Strasbourg the tourist visits the city of Rotterdam, celebrated for its pictures and antiquities; Coblentz and Mayence, two of the strongest fortresses in Europe; and passes through the scenery of the Rhingau, and by the mouth of the romantic Mayne and the beautiful Nechar. Above Strasbourg the banks of the river are not less charming all the way to Basle.

On the Phenomena of Flame. By J. O. N. Rutter, Esq. [From the London Mechanics' Magazine.]

"As in mathematics, so in natural philosophy, the investigation of difficult things by the method of analysis ought ever to precede the method of composition. This analysis consists in making experiments and observations, and in drawing general conclusions from them by induction, and admitting of no objections against the conclusions but such as are taken from experiments, or certain other truths. For hypotheses are not to be regarded in experimental philosophy."—[Sir Isaac Newton.]

The design of the following paper is to bring together a variety of experiments which may be considered as illustrative of the phenomena of flame. By applying to them the canon of philosophical research so beautifully described by Newton, we may, perhaps, arrive at conclusions at once instructive and satisfactory. It is very agreeable, and sometimes very convenient, to take shelter beneath the influence of great names. This love of ease, when the investigation of an intricate subject is concerned, tends very often to perpetuate error. Whenever acknowledged difficulties present themselves, they ought to be fairly met, rigidly examined—and, if possible, immediately removed. A course the very opposite to this is frequently pursued by very excellent and very learned men; among whom are some of the most popular scientific writers of the present day. With book-makers it is a common practice to transfer the opinions, and, in many cases, the very words of others, to their own columns, without examination; and, not unfrequently, without acknowledgment.

As the papers of Sym and Davies on flame, referred to by Dr. Thompson, in his Treatise on "Heat and Electricity," 8vo. London, 1830, p. 310, are not accessible to me, I have no means of ascertaining whether the following experiments have or have not been already described. If I have been anticipated in the whole of these investigations,* I can see no reason for rejecting or undervaluing, on that account, the information they supply.

1. If a piece of wire-gauze be brought down gradually upon the flame of a taper, or candle, the section of the flame, when viewed from above through the wire-gauze, will appear as a ring of light surrounding the wick, but not in contact with it.

2. A jet of coal gas will present a similar appearance. The orifice of the jet may be very distinctly seen in the interior of the flame.

3. If the wire-gauze be brought down in the way already mentioned upon a flame of coal gas, issuing from an Argand burner, the section of the flame will exhibit two distinct rings of light, and the thickness of the burner will determine the distance between the rings.

4. If an Argand lamp, with a wick supplied with oil, be employed, the thickness of the wick will determine the distance between the rings.

5. When the air is excluded from the interior of an Argand burner, the flame, whether it be that arising from gas or oil, which was previously cylindrical, assumes a conical form. Let the wire-gauze be brought down upon this flame, and there will be, as in the case of the taper, or the jet, (1, 2,) one ring of light corresponding with the exterior surface of the wick, or burner, (3, 4.)

6. The flames of alcohol, and of hydrogen gas, present in every respect the same phenomena as those described (1, 2, 3, 4, 5,) excepting, of course, in the quality of the light.

7. Phosphorus, if inflamed in contact with the atmosphere, and the wire-gauze brought down upon it, exhibits a ring of light. The experiment requires a little caution and dexterity. The opacity of the interior of the flame may, however, be very distinctly recognized.

8. If we take about three fourths of an inch of wax taper, insert it in a piece of glass tube the same length, employing as a foot to the taper so inclosed a disc of cork, sufficiently large to keep it steady; then, in a saucer or evaporating dish, coil some filaments of lamp cotton, so as to form a ring about two inches in diameter, and three fourths of an inch in height; saturate the ring of cotton with alcohol, light the taper, place it in the centre of the ring and inflame the alcohol, the taper will be extinguished. The heat in the interior of the flame of the alcohol will be sufficiently intense to vaporise the wax, which vapor will be decomposed and inflamed at the summit of the alcoholic flame, imparting to it a characteristic brilliancy; but the wick of the taper will not be inflamed if the process be properly conducted. To insure success in this experiment, we must guard against any agitation in the surrounding atmosphere, by moving about the room, opening or shutting doors, or breathing too freely in the immediate vicinity of the alcoholic flame. After observing all these precautions, we shall probably find that the flame will be in a continued flutter, occasioned by a current of rarefied air, and the taper will be alternately extinguished and relighted, just in proportion as the unsteadiness of the flame prevails or subsides.

9. Instead of a taper (8), if we place a piece of phosphorus in a small metallic spoon,* inflame it and pass it into the interior of the alcoholic flame, the phosphorus will be extinguished; suddenly withdraw it, it will inflame; pass it again into the interior, and it will again be extinguished.

The phosphorus, as already remarked of the taper, may be vaporised; and the vapor will become luminous as it enters into combination with oxygen at the summit of the alcoholic flame. Should it happen that the phosphorus has not been properly dried, small particles of it will be thrown out on every side: these will inflame the instant they come in contact with the external atmosphere.

10. We may vary this experiment by placing in the interior of the alcoholic flame (9) a small metallic cup,† containing alcohol, ether, or spirit of turpentine. These materials may be vaporised, but they will not flame in the cup as long as the alcoholic flame preserves its conical form.

11. If phosphorus (9) be placed in the centre of the flame of an Argand burner, (3, 4,) to which atmospheric air has access, it will inflame. If the further ingress of air be

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* I observe that Mr. Watson, Mechanics' Magazine, No. 551, page 362, has anticipated one of my experiments. I am hence induced to hold them all with a loose hand.

* A spoon for this purpose may be conveniently formed by flattening one end of a piece of copper wire.

† For cheapness and convenience, say part of a child's thimble.

prevented, the flame will become conical (5), and the phosphorus will be extinguished.

12. The result will be still more instructive, if we repeat the last experiment in an Argand burner supplied with coal gas, the ingress of air to its interior being prevented. Let the phosphorus be ignited and passed into the interior of the gas flame, the phosphorus will be extinguished. Turn off the gas, the phosphorus will be inflamed; turn on the gas, that will be inflamed, whilst the phosphorus will be again extinguished (10). If we employ alcohol, ether, or spirit of turpentine, in an Argand burner, supplied with oil, or coal gas, the results will be more uniform and satisfactory than with a large flame of alcohol, for the reason already stated (8).

13. A lighted taper placed in the interior of the flame of an Argand burner will continue to burn so long as air has access to it: exclude the air (5), and the taper will be extinguished. We may vary this experiment by employing a jet of coal gas instead of the taper. The result will be the same in both cases.

14. If a coil of platinum wire be held above the flame of alcohol, the wire will become incandescent. If we pass the wire into the interior of the flame, its incandescence will cease. In this experiment the effect will be more intelligible if we employ a spirit lamp with an Argand wick. The incandescence of the wire may be determined or prevented, by the admission or exclusion of air (11).

15. Instead of an Argand wick we may employ a common fibrous wick of cotton, say one inch in diameter, and it may be supplied with tallow, oil, or alcohol. The phenomena will be the same as those already described (5, 8, 9, 10.)

16. If a stream of oxygen gas be projected from below into the interior of a conical flame (5, 6, 15,) we shall observe the unusual phenomena of one flame within another.

17. A stream of oxygen gas, or of atmospheric air, projected upon any of the materials before mentioned, viz. phosphorus, ether, alcohol, spirit of turpentine, a jet of coal gas, or a taper, will produce an inflammation; but the inflammation will continue in the respective materials only so long as the supply of gas, or of air, is maintained.

18. If any of the materials just enumerated be placed in actual contact with the flames of tallow, oil, alcohol, or gas, whether interiorly or exteriorly, inflammation will ensue; but the combustion of the respective materials will be less perfect and less energetic when enveloped in the flame of some other body than when they are inflamed, under ordinary circumstances, in contact with atmospheric air.

19. The flame of an explosive mixture of coal and oxygen gases is of a pale blue color, and the greater the proportions of oxygen, within the limits of saturation,* the smaller is the flame, and the fainter is its hue, as compared with an equal volume of coal-gas when burning in the usual way. Similar phenomena present themselves in an explosive mixture of coal gas and of atmospheric air. In the latter case, the color of the flame is somewhat deeper.

* I employ this term for want of a better. By the limits of saturation, I mean those proportions of oxygen with coal gas most favorable to inflammation or explosion.

20. It is almost unnecessary to remark, that the flame of an explosive mixture of oxygen and hydrogen gases is of so pale a color as to be scarcely perceptible in daylight. This is not its most remarkable quality.

21. If a stream of hydrogen gas be ignited at the point of a jet, by bringing down upon it a piece of wire-gauze (2), we may ascertain that the flame is hollow. If a stream of oxygen gas be projected from a similar jet, in the same direction, and in immediate contact with the hydrogen, we shall find that, notwithstanding the additional supply of gas, (the proper proportions being half a volume of oxygen to one volume of hydrogen,) the flame will be immediately very sensibly diminished in size, and it will no longer appear hollow. Further: in the flame from hydrogen alone, the greatest intensity of heat will be found near to its extremity, at the apex of the cone. It is not so with the oxy-hydrogen flame—the point of greatest intensity in that being neur the base of the cone, where the greatest quantities of the two gases first enter into chemical union.

22. The analysis of coal gas teaches us that when it is of good quality, (sp. gr. 475 h. 550,) each volume will require for its complete combustion nearly two volumes of oxygen: one volume of oxygen, combined with an equal volume of carbon, producing carbonic acid; the other volume of oxygen, by its union with two volumes of hydrogen (condensed into one volume as it exists in carburetted hydrogen,) forming water.

23. The analysis of coal gas also enables us to understand the habits of explosive mixtures, and especially those of carburetted hydrogen (fire damp) and atmospheric air. Thus, when the relative proportions of inflammable gas and of air are as one volume of the former to five volumes of the latter, the mixture is not explosive; but if the quantity of air be gradually increased from five to ten, or even twelve volumes, the mixture detonates with increasing violence at every additional volume of air, up to the point of saturation.*

24. That mixtures of explosive gases, whose relative proportions are adapted to form most readily new compounds, will detonate with the greatest violence; and *vice versa*.

25. Explosive mixtures of coal gas, or carburetted hydrogen, and of oxygen, are subject to the same laws as mixtures of the same inflammable gases with atmospheric air. The former explode more uniformly and more promptly than the latter. This is a result we may expect, since in the former instance the particles of inflammable gas and its supporter must be in more intimate union than can possibly happen in the latter instance, through the interference of the azotic gas present in atmospheric air.

* See preceding note. As a familiar illustration of these phenomena, we may suppose 100 cubic inches of coal gas to be mixed with 500 cubic inches of atmospheric air. The mixture will not be explosive, because it will not contain a sufficiency of oxygen to support its inflammation—500 inches of air containing only about 100 inches of oxygen—and 100 inches of coal gas requiring 200 inches of oxygen for its complete combustion. If, however, 100 inches of coal gas be mixed with a thousand inches of air, the mixture will be explosive, since it will contain the relative proportions of the inflammable gas, and the supporter most favorable to inflammation or explosion. We know that when coal gas, or the fire-damp of mines, is mixed with air in proportions of one volume of the two former to any number of volumes intermediate between 5 and 10 of the latter, the mixture is explosive, but it is only so to a certain extent. When the proportions of air exceed 12 or 12½ volumes of inflammable gas, the mixture is not explosive—an excess of oxygen having, in this respect, the same effect as its deficiency

26. Those mixtures of explosive gases inflame the most readily through narrow tubes, and the interstices of wire gauze, whose relative proportions are best adapted for forming new compounds. We have no difficulty in understanding how it is that explosive mixtures inflame so readily in narrow tubes and in close vessels, if we bear in mind that the elements of combustion are arranged, in such mixtures, under the most favorable circumstances; and hence they require no aid from fresh accessions of oxygen externally applied.

27. If we apply a blow-pipe to the flame of a candle, a lamp, or a jet of coal gas, we shall find a greater intensity of heat will be obtained by projecting a stream of air across the flame near its base, than by projecting a similar stream across the upper portion or apex of the flame. We may obtain satisfactory proofs that these views are correct, if we consult any intelligent artificer who is in the habit of using the blow-pipe.

28. If we pass a piece of wire gauze across the base of a jet of coal gas (in the blue portion of the flame), the gas will continue to burn above the gauze as well as below it, and no free carbon will be deposited on the under side of the gauze; nor will there be any set at liberty from the flame above the gauze. By passing the gauze upwards, and holding it near to the apex of the flame, we shall perceive a different result. Free carbon will be deposited in abundance on the under side of the gauze, the flame above it will be extinguished, and, as the gauze becomes heated, a dense vapor of carbon will pass through, which may be inflamed.

29. This experiment may be varied, by substituting for a jet of coal gas the flame of a wax taper, a common candle, or an oil lamp. Instead of wire gauze, if we pass a piece of writing paper, or card board, into the blue portion of the flame, it will not be tarnished; we may repeat the same process about half way up the flame, and with the same result; but if we ascend towards the apex of the flame, the paper or the card will be blackened by the deposition of free carbon. Finally: if we hold the paper or card above the flame, it will not be blackened, a proof that no free carbon escapes into the atmosphere.*

30. An equal quantity of oxygen will combine with a given quantity of coal gas, or of carburetted hydrogen gas, under circumstances very dissimilar, and producing in one case a very feeble, and in the other a very brilliant light. Thus, two volumes of oxygen being mixed with one volume of coal gas, and the mixture inflamed as it issues from a jet, the flame will be small, of a pale blue color, and afford a very feeble light (19). One volume of coal gas, with ten volumes of air, will produce a similar effect, the flame being of a somewhat deeper color (19). When coal gas is inflamed in an atmosphere of oxygen gas, the flame is larger than ordinary, and the light from it exceedingly brilliant; and, as already mentioned, the same quantity of oxygen combines with a given quantity of the inflammable gas, as in

* The process of introducing and withdrawing the paper or card must, of course, occupy only a moment. The flame employed should be so trimmed as to be free from smoke.

the two former instances. The resulting compounds are alike in quantity and in character in each case (22).* The phenomena that accompany the combustion of coal gas, under ordinary circumstances, for the purpose of artificial illumination, are so well known that they can need no particular description.

31. If the flame of an explosive mixture of coal gas and oxygen, or atmospheric air, be treated with wire gauze or card board, as already described (28, 29,) it will be found that no free carbon will be liberated at any part of the flame, either within it or above it.

32. If there be projected upon a flame of coal gas a strong current of air, the flame will immediately be diminished in size, and it will exhibit all the properties of the flame of an explosive mixture (19, 31.)

33. In an attentive observation of the combustion of an explosive mixture of coal gas, or carburetted hydrogen and atmospheric air, within a safety lamp, we shall be sure to notice how speedily the flame from the wick will be extinguished. It will not, I suppose, be denied that this is occasioned by the absence of oxygen.

34. It may be ascertained by mere inspection, that the flame of the mixture within the lamp is hollow. Towards the top of the lamp the flame will sometimes assume a more brilliant aspect than at any other part. It more frequently happens, however, that free carbon (smoke) will escape from the top of the lamp.

35. If it be inquired whence arises the luminosity of the flame at the upper part of the lamp, or, in its absence, the free carbon (smoke), already mentioned, I reply, that whilst the explosive mixture burns within the cage, the heat evolved will be sufficient to carry on the evaporisation of the oil in the reservoir of the lamp. This vapor occupying, in a partial degree at least, the interior of the flame, will be converted into oil gas; and if there be present in the explosive mixture a large proportion of oxygen, a part of the gas will be decomposed, exhibiting its peculiar brilliancy (45). But should there be only a small proportion of oxygen present, the nascent oil gas will not become luminous, although it may be decomposed, and hence the separation of free carbon (smoke).

36. That the view here taken of the vaporisation of the oil is correct, may be satisfactorily proved, by employing in a similar mixture of explosive gases two safety lamps, one with the wick and the reservoir of oil adapted in the usual way, the other with a temporary wax wick attached to the reservoir, but without any oil therein. The relighting of the wick, on the re-admission of oxygen to the lamp containing oil, is, under these circumstances, perfectly intelligible (16, 17.)

37. An explosive mixture will burn tranquilly within a safety lamp, without raising the wire gauze to a temperature that will communicate inflammation to the surrounding atmosphere of explosive gases, so long as that atmosphere remains undisturbed; but if the lamp be exposed to a current of the explosive gases, the flame within the lamp will be driven against the wire gauze at the side opposite to that whence the current flows, and then the gas will become sufficiently heated to permit the flame to pass through, or to communicate inflammation to the external atmosphere.

38. Those explosive mixtures, the proportionals of whose elements assimilate the nearest to two volumes of hydrogen and one volume of oxygen, yield by combustion the greatest quantity of heat from a given volume of the mixture. Hence it is easy to understand that the relative proportions of a third element, as carbon in carburetted hydrogen, and azote in atmospheric air, determine the specific temperature of the mixtures in which they may be present.

39. The security afforded by the use of a cage of wire gauze in an explosive atmosphere is not entirely due to the radiating properties of the metal. The temperature, at any particular part of a large cylindrical film of flame of an explosive mixture, burning tranquilly within a safety lamp, will be very inferior to that arising from the combustion of the same materials under different circumstances. The vaporisation of the oil (35) will engage a portion of the heat given out by the combination of the gases. But there is another condition that demands especial notice. Whilst a current of the explosive mixture is flowing *inwards* through the interstices of the gauze at the base o the cage—which current, from its temperature and direction, cannot possibly communicate inflammation to the external atmosphere—a similar current of non-explosive materials (aqueous vapor, carbonic acid gas, free carbon, and azotic gas,) must be necessarily flowing *outwards* near the top of the lamp.* When these tranquil currents are disturbed by a sudden rush of the explosive atmosphere, or of comparatively fresh air, then it is that explosion ensues.

40. The phenomena that accompany the tranquil combination of explosive mixtures, at a temperature below that which is sufficient to inflame them, are so numerous and so interesting, especially when viewed in connection with Mr. Faraday's late researches into the action of platina upon gaseous bodies, that they will require a separate notice.

41. Having thus enumerated with a minuteness that it is feared will be considered by some as unnecessary, a variety of phenomena connected with flame, it now remains that we should inquire if the facts eliminated support and illustrate the theory of flame, as announced by Sir H. Davy, and the views which are advanced by other writers, some of whom stand deservedly high in the scientific world.

42. It is stated by Davy, in his Treatise on the Safety Lamp, 8vo., London, 1825, p. 46: That "the flame of combustible bodies, in all cases, must be considered as the combustion of an *explosive mixture* of inflammable gas, or vapor and air: for it cannot be regarded as a mere combustion at the surface of contact of the inflammable matter; and the fact is proved by holding a taper or a piece of burning phosphorus within a large flame made by the combustion of alcohol, the flame of the candle, or of the phosphorus, will appear in the centre of the other flame, proving that there is oxygen even in its interior part."

Dr. Ure, Dict. Chem., 4th edit., London, 1831, has quoted verbatim the above paragraph, Art. Combustion, p. 357, without acknowledgment. He has also enriched his pages by copious extracts from Davy's work throughout the same article.

Dr. Graham, Chem. Catechism, 2d edit., London, 1829, Art. Combustion, p. 589, also quotes without acknowledgment a part of the paragraph. In a note there is the following piece of information: "The form of flame is conical, because the greatest heat is in the centre of the *inflammable mixture*."

Dr. Thompson says, in his admirable Treatise on Heat and Electricity, 8vo., London. 1830, p. 309: "Flame is the rapid combustion of volatilized matter. The tallow or the wax is melted and drawn up to the top of the wick of a candle. Here it is boiled and converted into vapor, which ascends in the form of a column. This vapor is raised to such a temperature that it combines rapidly with the oxygen of the surrounding atmosphere, and the heat evolved is such as to heat the vapor to whiteness. Flame, then, is merely volatile combustible matter heated white hot. The combustion can only take place in that part of the column of hot vapor that is in contact with the atmosphere, namely, the exterior surface. The flame of the candle, then, is merely a thin film of white hot vapor, enclosing within it a quantity of hot vapor, which, for want of oxygen, is incapable of burning."

Dr. Lardner, Cab. Cyc., Treatise on Heat, p. 358, seems to entertain similar views to those expressed by Dr. Thompson. By the frequent interchange of the terms "gas," and "vapor," the passage in the Cab. Cyc. is, however, rendered somewhat obscure.

43. If we observe with attention the flame of a combustible body with whose habits we are familiar, say, for example, a common tallow candle, it will be found to exhibit the following phenomena. The tallow being liquified by the proximity of a burning body, rises, by capillary attraction, between the filaments of the wick. As it approaches the flame it is converted into vapor, from which state it readily passes into that of gas. The flame not being in actual contact with the wick (1), the vaporisation of the tallow goes on simultaneously at every part of the wick surrounded by the flame. The blue portion of the flame, at its base, as well as the fainter film of blue that surrounds its other parts, denote the chemical union of carburetted hydrogen and oxygen gases (19, 30, 31.) As this union is a continuous process, accompanied by the evolution of heat, a temperature is speedily attained of sufficient intensity to decompose a great proportion of the nascent inflammable gas. By this decomposition successive portions of carbon are separated from hydrogen. The hydrogen combines with oxygen, forming water; the carbon at this elevated temperature becomes luminous, and combining also with oxygen, yields carbonic acid gas (22).

44. It will be seen that I do not agree with Dr. Thompson (42), who maintains that the flame of a candle "is merely a thin film of white hot *vapor*." We are accustomed to say, that the vapor of certain bodies, as of alcohol, or ether, is inflammable, but I consider the inflammability of these vapors is due entirely to the facility with

* Such frequent reference is made to coal gas, because now that gas light is making rapid progress among the provincial towns of this kingdom, there will be greater facilities than formerly for obtaining it in researches of this kind. I object to the employment of the generic term, carburetted hydrogen, in a sense synonymous with coal gas.

* The comparatively low temperature of the flame of explosive mixtures present in coal mines, is doubtless owing, in a great measure, to the vast quantities of azotic gas contained in those mixtures.

which they are convertible into gases under certain specific conditions, and the influence of a certain temperature.*

45. If the view we have taken be correct (43), it seems that the combustion of a tallow candle involves a somewhat complicated, yet, if carefully analyzed, an exceedingly beautiful process. It is a conical film of luminous matter (1), changing gradually upwards, from blue to white. It contains, in its interior, nascent inflammable gas; but no oxygen (15, 16.) At the very base of this film of flame, at a temperature which may be termed specifically its own, we may perceive indications that a chemical union is going on between carburetted hydrogen and oxygen gases; aqueous vapor and carbonic acid gas being projected from the flame at this part.† The supply of inflammable gas from within being constant and regular, and an equally uninterrupted supply of oxygen being established by the rarefaction of that portion of air in the immediate vicinity of the flame, the heat given out by the sudden union of one portion of inflammable gas with oxygen is sufficient to decompose a large portion of the same material. To the latter part of the process are we indebted for the illuminating properties of the flame. Hence also those important distinctions perceptible in different parts of the same flame (30).

46. The flame of combustible bodies cannot, therefore, "in all cases be regarded as the combustion of an *explosive mixture* of inflammable gas, or vapor and air," but as the tranquil and progressive combination of inflammable gas with oxygen. The combustion of explosive mixtures differs from that of a common candle or coal gas, (19, 20, 30, 31, 43, 44, 45,) inasmuch, that in one case there is an immediate combination of all the inflammable gas with oxygen; in the other, a part only so combines, whilst the greater portion undergoes decomposition previous to its ultimate combination (29). The resultants are the same in both cases; but the conditions that produce them essentially differ.

47. What has been said respecting the flame of a candle may be applied, without difficulty, to the flame of those combustible bodies with which we are familiar in the ordinary affairs of life. The flame of a tallow candle, an oil lamp, and a coal fire, present not only similar, but identical phenomena. The flame of coal gas differs from each of the preceding. In the three former there is a vaporisation of the elements of the combustible body,—a spontaneous, or, if I may employ the term, an extemporaneous transition of this vapor to gas; then follows inflammation, decomposition, and re-composition. In the latter case, the gas being previously generated, inflammation is the first stage in the process of combustion: the subsequent stages are identical."*

48. That all the vapor arising from a combustible body is not, excepting under particular circumstances, converted into gas, is abundantly evident by the free carbon (smoke) that arises from a candle, a lamp, and a coal fire. Equally evident is it that certain conditions must be observed in effecting the combination of all the elements of a previously prepared gaseous body with oxygen. This we learn by the free carbon (smoke) given off from coal gas, when too much is admitted to the burner.

49. Those bodies which contain a large portion of carbon, as compared with their other elements, require different management from those whose elements of inflammability assimilate in more exact proportions. It will be sufficient to mention, and to place in juxta-position,

Ether - -	Spirit of turpentine.
Sperm oil - -	Coal tar.

In ether and in sperm oil, hydrogen and carbon exist in such proportions, that they readily pass through the several stages already described (47), and form with oxygen new compounds.† Spirit of turpentine and coal tar, containing, on the contrary, an excess of carbon, require a different treatment to effect their entire combination with oxygen.

50. It is inexplicable why Davy employed a larger flame of alcohol in his researches in preference to a smaller one, since it is so difficult to conduct with the former a fair and accurate experiment, whilst with the latter the results are uniform and conclusive (8, 12); we have no difficulty in ascertaining that flame is hollow (1, 2, 3, 4, 5, 6, 7;) we have the most conclusive evidence that oxygen exists not in the interior of flame (8, 9, 10, 12, 13, 14, 15, 16, 17); not even in that of explosive mixtures (33). And equally certain is it that the habits of explosive mixtures are very unlike those exhibited by combustible bodies under ordinary circumstances (19, 20, 21, 23, 30, 31.) Further, we may not only satisfy ourselves that the flame of a candle or lamp is conical and hollow, but we may ascertain that it does not consist only of a thin film of luminous matter, and that combustion takes place only at the surface where the inflammable gas comes in contact with oxygen. Thus, the flame from an Argand burner, when air has access to its interior, is not only cylindrical, but hollow, *i. e.* it consists of two concentric cylinders, or films of luminous matter (3, 4,) whilst the flame from the same burner, when air is excluded from its interior, consists only of one cylinder, or an external film (5). Difficult as it may be to understand how so eminent a philosopher as Davy could have erred in relation to this subject, I think we have no alternative but to reject his theory of flame, since it is wholly unsupported by fact and experiment. This will be done, I have no doubt, by all who, unbiassed by prejudice, and unawed by great names, will take the trouble to investigate the matter for themselves. J. N. O. Rutter.

Lymington, Hants, May 14, 1834.

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* Some have maintained that the bodies we designate gaseous are nothing more than vapors. I here only speak of things as we find them. If gases are vapors, we know them to be more complex and refined, as regards the arrangement of their particles, than vapors, in the popular acceptation of the term. Should it be objected that vapor of certain inflammable bodies detonate, if mixed with oxygen, in the same way as explosive mixtures of gases, I have only to reply that the detonation is the result of the sudden and spontaneous evolution of gas, and its re-union with the oxygen present. These processes may be the work only of 1-100th or 5-100th part of a second.

† To ascertain this fact by experiment, the following simple means may be employed: If a piece of cold glass or polished metal be held near the blue part of the flame, aqueous vapor will be projected upon it. 2. If a drop of a saturated solution of lime (lime-water) be held at the end of a small glass rod or tube near the blue flame, the water will become turbid—carbonic acid gas combining with the lime and separating it from the water This latter experiment must be the work of a moment, or we may be deceived by simply vaporising the water.

* The quality of the light from different bodies will depend—all other circumstances being the same—on the qualities of the combustible body. The most intensely white light evidently contains a greater portion of olefiant gas than a dull yellow light. It is not, however, unworthy of remark, that very much depends on the management of the materials. A tallow candle, with a small compact wick, will yield a more brilliant light—I mean as to its quality—than a similar candle with a large fibrous wick. What is usually termed the perfect combustion of the materials is, in fact, only another term for the perfect combination of all the inflammable elements with oxygen.

† It may not be improper to remark, that when aqueous vapor exists in an inflammable body, as in alcohol and ether, there must of necessity be oxygen present. When, however, the vapor of this body is converted into gas (44), the oxygen does not act the part of a supporter; but by combining with half its volume of oxygen, yields carbonic oxide, which, under favorable circumstances, becomes, by the addition of another half volume of oxygen, carbonic acid.

New Locomotive Engine.—[*From a correspondent at Liverpool.*]—On the 22d June, a new Locomotive Engine, made by Messrs. Forrester & Co. of Vauxhall Foundry, was tried on the Liverpool and Manchester Railway. The experiment was crowned with the most b ant success; the engine, which is called the Vauxhall, was proved to be the most powerful and rapid engine ever on the line.

At eleven A. M. she left the Liverpool station with an extra train of carriages and luggage, and arrived at Manchester, (32 miles,) in 57 minutes. On her return she brought a very full train of first class carriages, a private carriage mounted on a surry, and a heavy luggage waggon, in 67 minutes.

She mounted the inclined planes in grand style. The distance has been run in less time, but never with any thing approaching the weight this engine drew.

She is intended for the Dublin and Kingstown railway, the Directors of which, attended by C. B. Vignoles, Esq. their Engineer, accompanied the engine to and from Manchester, and were highly pleased with the satisfactory result of the experiment.

To the Editor of the Railroad Journal.

Sir,—I have observed in several late papers an account of an invention by which accidents, like those that have lately occurred upon the inclined planes of the Columbia and Philadelphia and the Alleghany Portage Railroads, may be prevented. In my humble opinion the inventor has gone to a great deal of useless trouble and expense in making rack-work, cog-wheels, and what not. The same end may be obtained by a very simple contrivance, that has long been in use upon the planes of the Baltimore and Ohio Railroad. It is simply a piece of timber, say 2½ inches square, by 5 feet long, shod with iron at one end, trailing behind the car, on a pivot or hinge, so that the instant the rope gives way, the iron point *digs* into the ground and arrests the descent of the car. The danger with regard to ascending trains is thus very easily guarded against. It is otherwise with descending ones, as it is obvious that any sudden check applied to a car going with any rapidity would either destroy the car, or shoot forward the load from the car. In descending trains, therefore, the conductors should be ever on the alert, and the moment they perceive any thing give way apply the ordinary break, which, if properly constructed, will gradually moderate the velocity until it is safe to use the more effective check before described. Safety Valve.

Mr. Burden's Boat.—We are sorry to learn, says the Albany Evaning Journal, that the injury to Mr. Burden's steamboat is more serious than we supposed yesterday. Both cylinders are entirely destroyed. The loss, we understand, will not fall below $25,000. Nor did the accident occur, as we first heard. The channel was obstructed by vessels, between one of which and the dam the boat had to pass. Finding the passage too narrow, the pilot first rang his bell to "stop her," and then to "go back." This last bell the Engineer misteok for one to "*go a-head*," which brought her up on the dam.

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 405.)

The valves have no power of accelerating the motion of the blood; they only prevent its retrograde motion, and cause the whole power of the heart to be employed in directing the blood forwards in the course of the circulation. But when they are ruptured, when the valve first described is rent, or the cordæ tendineæ are broken, then the membrane, which we have said is like a sail, is carried back from the second into the first cavity. It is like the sail torn from the sheets and flying out before the wind: the effect is terrible: the pulse of the heart, the whole force of which should be given to carry the blood forwards in the arteries, has half its force directed backwards upon the veins.

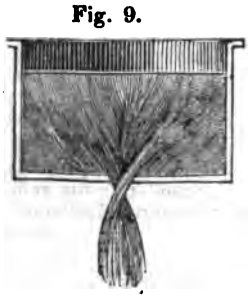
In the same manner the semi-lunar valves in the root of the aorta may have their margins torn. We have described the margin of these valves to be strenghtened by a tendon or cord run along their edge, like the rope which is sewed to the edge of a sail. There is an obvious intention in strengthening the valve here, but when textures of this kind become impaired in the human frame, this may give way and be torn, and then the re-action of the artery, when the heart has given its stroke, is lost; for, instead of impelling the blood forwards, the blood runs backwards into the heart. The effect of these accidents is extreme debility of circulation, with symptoms varied according as the defect falls on the circulation through the lungs, or through the body—that is, whether on the right or the left heart of man. But such accidents are rare, and never take place until disease has impaired the strength of what we may call the tackle of the valve.

The next remark is founded more directly on the hydraulic principle.

This ring and these valves, at the beginning of the great artery, imply a certain constriction or diminution of the tube at this part, and we have now to show that such a contraction of the tube at this precise part does not diminish the diameter of the column of blood. This appears an inconsistency; but if a stream of water flow from a cistern, through a hole in that cistern, the column of water will be diminished at a certain point of its exit.

The water flowing through the bottom of the cistern may be represented by converg-

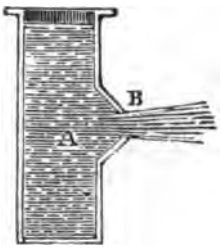
Fig. 9.



ing lines; and their united forces impelling the stream forward, contract it just beyond the exit—the *Vena Contracta.* Nature, taking advantage of this law, has constructed the narrow ring which we have shown is necessary to the accurate adjustment of the valve, at the precise part where the blood, issuing from the cavity of the ventricle, is necessarily contracted to the smallest space. The column of blood would be contracted at this point, even if there were no coats of the artery to confine it there.

We had thought of this as a thing indicated by reasoning, but we find that an appropriate experiment has been made which proves it.

Fig. 10.



A being the side of a reservoir, and B a short tube giving issue to the water, it will deliver as much water by this conical constructed mouth as if the tube were of equal diameter with the hole in the reservoir. The reader will perceive how satisfactorily this indicates what is designed by the difference in the size of the mouth of the ventricle which gives entrance, and that which gives issue to the blood.

With a view to explain the motion of fluids in tubes, and finally the motion of the blood in the blood-vessels, let us consider what takes place in the motion of the column of water which is not contained in a tube.

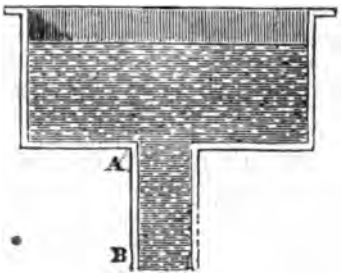
When water is poured out, and descends in an uninterrupted stream, the column contracts as it descends, until it has acquired such a velocity that the atmosphere opposes it and scatters it; we do not mean the contraction illustrated by fig. 9, but that gradual diminution of the diameter of the stream, owing to the height from which it falls. We apprehend that this is on the principle that falling bodies are accelerated as the square root of the height from which they fall. The stream being more rapid at its lower part, is necessarily smaller in diameter, until having acquired considerable velocity the resistance of the atmosphere separates its filaments, and it becomes broader again.

A very different appearance is presented in a jet d'eau; here the ascending stream

Fig. 11.

widens as it ascends. The explanation of this we conceive to be, that the fluid is retarded as it mounts, and that the stream propelled from below *is* forced between the filaments* of the column above, and disperses them, so as to give the column a conical form.

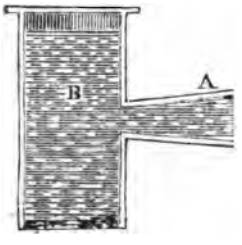
Fig. 12.



This reservoir will be emptied more rapidly, if, instead of a hole in the bottom at A, the water be discharged by a tube, A B, of the diameter of the hole. Here the column of water being perpendicular, it will be accelerated at its lower part; but instead of diminishing its diameter, as it would do if not confined by a tube, it will draw an additional volume of water down, and accelerate the discharge.

It will be very different if the force be altogether from behind, as when water is propelled into a horizontal tube.

Fig. 13.



The tube A being conical, will discharge more fluid from the reservoir B than if it had been of equal length, and its diameter throughout the same as at its commencement. Because, as it appears to us, the weight of the descending column being the force, and this operating as a *vis a tergo*, it is like the water propelled from the jet d'eau, and the gradual expansion of the tube permits the steam from behind to force itself between the filaments, and disperses them, without producing that pressure on the sides of the tube which must take place where it is of uniform calibre. These principles will give great interest to the following fact.

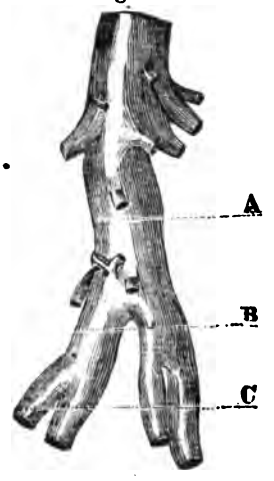
The celebrated John Hunter took great pains to prove that the artery had its diameter enlarged as it proceeded from the heart, and that the areas of the branches of an artery were greater than the diameter of the parent trunk.

That is to say, the section of the trunk, at A, was not so great as the two sections, at B, taken together; that the two sections at B taken together were not so great as the four sections at C; that the conjoined diameters, therefore, of the branches of an artery were greater than the diameters of the artery itself. This fact has been sometimes expressed by saying that the artery was a cone with its apex in the heart.

When we stand by a rapid river, we can perceive that the surface of it is not level.

* Those who treat of hydraulics divide a column of water into ideal lesser columns, which they call filaments, with a very different meaning from the fibres of the anatomists.

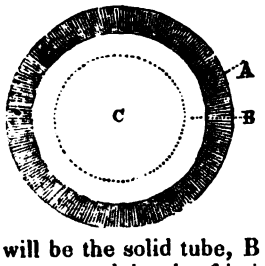
Fig. 14.



The stream is rapid in the middle, and there the water is highest. The friction of the water against the bottom and the sides retards the stream, whilst the greater velocity of the current in the centre draws the water to it, which is the reason of its elevation there.

For the same reason, if an engineer estimate the quantity of fluid to be delivered through a tube without estimating the friction of the sides, he will be disappointed in the result of his calculation; for as the water of the river is delayed by the bottom and sides, so is the fluid in the tube retarded by the attraction or friction between the water and the tube. And if we can imagine a section representing the tube and the flowing

Fig. 15.

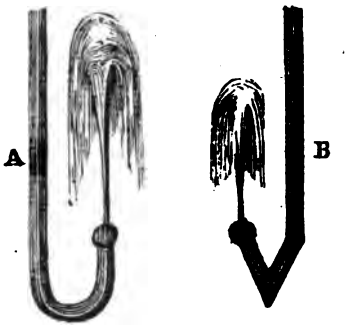


water, A will be the solid tube, B the water retarded or arrested by the friction against the tube, and the space C, within the inner circle, would represent that part of the stream which is in uninterrupted flow. The engineer will, therefore, lay a tube larger than would be necessary, were there neither attraction nor friction between the solid and fluid. It must further appear that the smaller the calibre of the tube, the surface of attraction or friction will be proportionally greater. Does not this explain the anatomical fact which we have been contemplating, that the area of the smaller branches is comparatively larger than the trunk from which they are derived?

Two beneficial effects result from this: for we must observe that the blood-vessels of the body are reservoirs as well as conduit pipes. A man of middling stature has 33 lbs. of blood in his circulating vessels; if the vessels did not enlarge as they receded from the heart, there would be no place for the deposite of this great quantity of blood. The advantages, then, of this particular form, are, *first*, that a quantity of blood necessary to the economy is contained within the vessels; and, *secondly*, that the blood is more easily urged forwards by the action of the heart. The reader will not now be surprised in learning, that a pipe of a conical form, that is, enlarging as it proceeds, gives the least interruption to the flow of water from a reservoir.

Water flowing in a tube will be retarded by any sudden angle in the tube. If the ad-

Fig. 16.



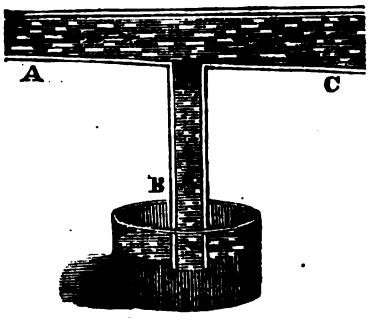
jutage of a jet d'eau have not a gentle and uniform sweep where it is turned, the jet of water will not reach the height which it ought to do by calculation of the height of the reservoir of water from which it descends: it will go higher from the tube A than from B. This circumstance explains the uniform and parabolic curve which the great artery of the body takes in first ascending from the heart. It explains also why the branches of the great artery go off at different angles, according to their distance from the heart, or, in other words, why they pass off at smaller angles with the stream the farther the artery recedes from the heart.

In the distribution of water pipes, it is very necessary to attend to the angle at which the small pipe is attached to the greater one, not only because a pipe being bent abruptly causes loss of motion from the impulse of the fluid against the side, but also from another well known law of hydraulics.

a pipe be fixed into another so as to join it at an angle contrary to the direction of the stream, the discharge into that lateral branch from the larger tube will not only be much smaller than we might estimate by the diameters of the tubes, but, in certain circumstances, it will discharge nothing at all; nay, on the contrary, the water would be drawn from the lesser tube into the greater, until the lesser tube be emptied, and air be sucked in.

Bernouilli found that when a small tube, B, was inserted into the side of a horizontal

Fig. 17.



conical pipe, A, in which the water was flowing towards the wider end, C, not only none of the water escaped through the small tube, but the water from a vessel placed at a considerable distance below was drawn up through the tube B into the pipe A.

The Duke of Sutherland was unanimously elected President of the British Institution, at a recent meeting of the Directors and Governors of the Institution.

AGRICULTURE, &c.

Remarks on the Leafing of Oak Trees, and the Tints of the early Foliage. By the Rev. W. T. Bree, A. M. [From Loudon's Gardener's Magazine.]

[The following article is deserving the attention of all those who study landscape gardening. It exhibits the accurate observations and taste of this writer.—Ed.]

The most inattentive observer can hardly fail to have remarked that there is a very considerable difference, (a difference, perhaps, of not less than a month or six weeks,) in the period at which different individuals of the same species of oak, (Quercus Robur,) expand and shed their leaves: those, of course, which assume their foliage earliest in the spring, losing it earliest in the autumn; and *vice versa*. Accordingly it is very common to see one oak tree in full verdure, while its next neighbor, only a few yards distant in the same wood or hedgerow, is perfectly bare, or, at most, with its buds only bursting. It is an equally obvious remark, that these trees vary no less in the tints which they exhibit on first coming into leaf; and, again, nearly as much so when they are preparing to lay aside their honors in the autumn. "The budding oak," says Gilpin, "displays great variety." Of the vernal tints, which, if not so rich and luxuriant in the eye of the painter, are yet exceedingly tender and beautiful, some are of a delicate green, others rich brown, yellow, bright sulphur-colored, red almost approaching to scarlet, with innumerable intermediate gradations of color. It strikes me that these obvious facts might be turned to good account by the planter, whether his chief object in planting be profit or ornament. If there be any truth in the received opinion, that, "of trees of the same species, those which expand their leaves last in the spring, and shed them last in the autumn, afford the best timber," it would surely be worth any one's while, who plants for profit, to select his oaks accordingly. Again, in mere ornamental planting, much advantage might result from paying attention to the different tints exhibited by the foliage, respectively, both in spring and autumn. It is easy to conceive the happy effect which might be produced by either harmoniously grouping together individuals of the same hues in their early foliage, or by judiciously contrasting those of different ones. A whole grove or avenue might be formed, which, at that most interesting season of the year, when the leaves are yet tender, should display, throughout its entire extent, a regular series of graduated tints, or any other combination of color, according to the taste or fancy of the planter; and a corresponding effect would, if I mistake not, be visible also in the autumn. In one part of the park or pleasure-ground it may be desirable that a particular spot should be occupied by oaks which come into leaf the earliest of their kind; while, in another, it may be no less an object to introduce such as retain their leaves to the latest period in the autumn. Even in the case of single trees, it may, according to circumstances, be of some importance to the landscape, whether the one selected for a particular situation be early or late in its period of leafing, of one color or another. Innumerable, in short, are the arrangements, the agreeable contrasts and combinations, which might be formed by paying attention to the above circumstances. I do not pretend to lay down precise rules for the guidance of the planter; I merely throw out a few hints in the hope of drawing attention to an interesting subject, which appears to me to have been more neglected than it deserves.* With most planters, and, I believe I may say, with all nurserymen, oaks are oaks, and that is all: no regard whatever is had to the individual varieties of our native oak, unless, indeed, these be of a very marked and unusual character. Now, if there were a call, on the part of purchasers, for the

early or the late leafing varieties, or for those of this or that particular tint or form of foliage, nurserymen would soon learn to sort their oaks accordingly, in order to meet the demand of their customers, or planters, by sowing the acorns and raising their own oaks, might adopt the same method themselves. Nothing could be easier than to do this; for the oak is a tree which developes the peculiar characters which I have above alluded to, at a very early stage of its existence; even the very first season it springs from the acorn, as will be obvious to any one who will but examine a seed-bed when the young trees are first coming up in the spring. There he will see some in broad foliage, while others are only just emerging above the ground. Every variation of color, also, will be perceptible, as much as in trees of mature age; and these peculiarities, it is to be observed, are constant in the individuals, and are retained throughout life: as is the infant seedling, in regard to its period of leafing, and the tints of its foliage, so is the full-grown oak. Even extreme old age is not found to retard the expanding of the leaves, or to affect their color. I consider a bed of seedling oaks, exhibiting, as it does, such diversity of color and of form in the foliage, a most interesting object for contemplation; and I have sometimes fancied that even more of the future characters of the mature tree, such as its propensity to run tall or short in the stem, spreading in the limbs, and the general style and figure of the head and branches, might almost be predicted at this early period: but this, perhaps, is mere idle speculation.

I may add, that the same discrepance in the period of assuming and shedding the leaf is observable in other trees besides the oak, especially in the horse chesnut, the beech, and the ash.

W. T. Bree.

Allesley Rectory, February 21, 1834.

A Parasite Tree.—I have recent ly, on a visit to Mr. Gee's plantation, three miles south of Quincy, Gadsden county, in this ter ritory, observed a natural curiosity; the following description of which may be interesting to you and many of the readers of the American Journal of Arts and Science: It is a yellow pine tree bearing another in a perfectly healthful and flourishing state, like itself and those in the woods around them. The trees, as represented in this sketch, are united about thirty-five feet from the ground, where they entwine around each other. The one that is borne (marked A) extends down to within about two feet of the ground, and is alive and healthful to its lowest extremity. These trees have been in the condition in which they now are for a period longer back than the first settlement of the country by the present population. They were pointed out by the Indians as a curiosity to the first Americans who came to Florida. The stump of the tree which is borne has long since disappeared, and the place which it occupied is now grown up in small bushe of grass.—[Letter in Silliman's Journal.]

METEOROLOGICAL RECORD, KEPT AT AVOYLLE FERRY, RED RIVER, LOU.

For the months of May and June, 1834.—(Lat. 31.10 N., Long. 91.59 W. nearly.)

Date. 1834.	Thermometer. Morn'g.	Noon.	Night.	Wind.	Weather, Remarks, &c.
May 1	72	81	80	s	clear—thunder and rain, evening—Red River rising
" 2	70	79	68	..	.. —cloudy morning—Red River at a stand
" 3	69	76	74	..	cloudy—hail and rain and thunder at night
" 4	74	84	76	..	clear all day—Red River falling
" 5	62	76	74	w	..
" 6	67	75	72	nw	..
" 7	52	68	62	w	.. —at 1 p. m. thunder showers, rain and hail
" 8	50	62	72	high	..
" 9	58	81	68	..	..
" 10	64	85	78	..	..
" 11	62	78	76	calm	.. ..
" 12	64	82	76	..	cloudy
" 13	66	82	70	..	.. —rain in the evening
" 14	60	62	62	ne	.. —rain all day and night
" 15	60	64	62	..	.. — .. .. ..
" 16	62	72	72	calm	clear all day
" 17	60	78	75	..	.. —cloudy at noon—wind, NE
" 18	64	78	72	se—high	cloudy all day
" 19	67	72	70	calm	.. —rain
" 20	68	76	71	se	..
" 21	66	78	79	..	..
" 22	68	82	77	calm	clear
" 23	68	83	78	..	..
" 24	66	84	78	..	..
" 25	67	84	79	n—light	..
" 26	69	85	82	calm	..
" 27	70	86	82	..	..
" 28	72	88	84	..	..
" 29	70	78	68	..	..
" 30	66	76	76	..	cloudy—heavy rain in evening and night
" 31	68	78	88	..	clear all day
June 1	74	86	82	..	.. .. —Red River fell this month 4 ft. 8 in.—below high water mark, [8 ft. 7 in.
" 2	74	86	84	..	cloudy—Red River falling
" 3	74	88	84	..	clear—saved first crop red clover hay
" 4	76	86	84	..	..
" 5	77	88	84	s—light	cloudy morning—clear day—digging Irish potatoes
" 6	73	90	83	..	clear
" 7	72	89	84	..	.. all day
" 8	73	87	92	calm	.. ..
" 9	72	86	82	..	.. .. —cutting oats
" 10	72	90	83	s	.. ..
" 11	74	88	82	sw	.. —evening calm and cloudy
" 12	68	86	80	w—light	cloudy morning—evening clear—wind N
" 13	70	90	84	calm	clear all day
" 14	71	90	82	sw—light	.. —flying clouds
" 15	70	88	82	..	.. —evening, distant thunder—tomatoes ripe
" 16	73	83	76	..	.. — .. .. ..
" 17	73	82	74	s	.. —evening, cloudy and distant thunder
" 18	74	84	78	calm	cloudy— .. .. .. —finished cutting oats
" 19	70	89	82	..	clear— .. .. ..
" 20	72	88	80	n—light	.. — .. .. .. —ochre for use
" 21	70	80	69	calm	.. —foggy morning—evening, a light shower
" 22	70	88	80	ne—high	.. —clear evening—at 1 p. m. to 7 p. m. a severe gale & heavy rain—corn [blown down
" 23	76	88	82	..	..
" 24	74	81	76	s—light	cloudy—light shower
" 25	74	86	74	s	.. — .. ..
" 26	72	89	84	..	.. evening—heavy thunder shower
" 27	74	89	84	s—light	clear— .. .. ..
" 28	74	88	82	..	..
" 29	72	88	82	..	..
" 30	75	90	—	..	.. [water mark, 17 ft. 1 in.
				..	.. —evening rain—Red River fell this month, 8 ft. 6 in.—now below high

P. S.—The storm on the 21st of June injured our crops of corn very much.

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LITERARY NOTICES.

The Principles of Physiology applied to the Preservation of Health, and to the Improvement of Physical and Mental Education; 1 vol.; by Andrew Combe, M.D., Fellow of the Royal College of Physicians of Edinburgh. New York: *Harper & Brothers.*

It is long since we met with a work of the same size which contained such a mass of useful knowledge as does the little 18mo before us. It is an elementary book on physical education, wherein every principle laid down is illustrated by some fact that instantly impresses its truth upon the mind.

The work is already so generally spoken of, and and approved, that it is not necessary to go into a minute examination of its contents; but we have marked a number of passages for quotation, which will give some idea of the philosophic thought and study, which Mr. Combe has brought to the most familiar subjects, and the enlightened application he has made of ordinary facts, to elucidate his principles.

Happy would it often be for suffering man could he see beforehand the modicum of punishment which his multiplied aberrations from the laws of physiology are sure to bring upon him. But, as in the great majority of instances, the breach of the law is limited in extent, and becomes serious by the frequency of its repetition rather than by a single act; so is the punishment gradual in its infliction, and slow in manifesting its accumulated effect; and this very gradation, and the distance of time at which the full effect is produced, are the reasons why man, in his ignorance, so often fails to trace the connexion between his conduct in life and his broken health. But the connexion subsists, although he does not regard it, and the accumulated consequences come upon him when he least expects them.

Thus, pure air is essential to the full enjoyment of health; and reason says, that every degree of vitiation must necessarily be proportionally hurtful, till we arrive at that degree at which, from its excess, the continuance of life becomes impossible. When we state this fact to a delicately constituted female, who is fond of frequenting heated rooms, or crowded parties, theatres, or churches, and call her attention to the hurtful consequences which she must inflict on herself by inhaling the vitiated air of such assemblies, her answer invariably is, that the closeness and heat are very disagreeable, but that they rarely injure *her*: by which she can only mean, that a single exposure to them does not always cause an illness serious enough to send her to bed, or excite acute pain; although both results are admitted sometimes to have followed. An intelligent observer, however, has no difficulty in perceiving that they do hurt her, and that although the effect of each exposure to their influence is so gradual as not to arrest attention, it is not the less progressive and influential in producing and maintaining that general delicacy of health by which she is characterized, and from which no medical treatment can relieve her, so long as its active causes are left in operation.

The debility so generally complained of in spring by invalids and persons of a delicate constitution, and which renders that season of the year so formidable in prospect, and in reality so fatal, seems to result more from the accumulated effects of the preceding winter months than from any thing directly inherent in the season itself. At the commencement of winter, such persons feel comparatively strong from the beneficial influence of exposure to the open air, light, and exercise, during the preceding months of summer and autumn. But in proportion as they are deprived of these advantages by the advance of winter, and are subjected to the evil influence of confinement to close rooms, deficient exercise, cold damp air, and deprivation of the stimulus of light, the stamina of the constitution become impaired, and debility and relaxation begin to be felt, and make progress from day to day, till on the arrival of spring they have reached their maximum, and either give rise to positive disease, or gradually disappear at the return of the invigorating influence of longer and warmer days. * *

It is believed by many, that marsh miasmata and and other poisons are absorbed by the skin, and Bichat considered the fact as established in regard to the effluvia of dissecting-rooms. There are many reasons for concurring in this belief. The plague, for instance, is known to be much more readily communicated by contact than by any other means, and this can happen only through the medium of absorption. Again, it is certain that flannel and warm clothing are ex remely useful in preserving those who are unavoidably exposed to the action of malaria and of epidemic influences; and these manifestly act chiefly by protecting the skin. A late writer on the Malaria of Rome strongly advocates this opinion, and expresses his conviction that the ancient Romans sufferd less from it, chiefly because they were always enveloped in warm woollen dresses. This opinion, he says, is justified by the observation, that since the period at which the use of woollen clothing came again into vogue, intermittent fevers have very sensibly diminished in Rome. Even in the warmest weather the shepherds are now clothed in sheep skins. Brochhi, who experimented extensively on the subject, obtained a notable quantity of putrid matter from the unwholesome air, and came to the conclusion, that it penetrated by the pores of the skin rather than by the lungs. Brocchi ascribes the immunity of the sheep and cattle, which pasture night and day in the Campagna, to the protection afforded them by their wool. These remarks deserve the serious attention of observers,—particularly as, according to Patissier, similar means have been found effectual in preserving the health of labourers digging and excavating drains and canals in marshy grounds, where, previous to the employment of these precautions, the mortality from fever was very considerable.

It is a general law, that every organ acts with increased energy when excited by its own stimulus; and the application of this law to the different functions of the skin may help to remove some of our difficulties. The skin exhales most in a warm dry atmosphere, because the latter dissolves and carries off the secretion as fast as it is produced; and the same condition is unfavorable to absorption, because nothing is present upon which the absorbents of the skin can act. In a moist atmosphere, on the other hand, the absorbents meet with their appropriate stimulus, and act powerfully; while exhalation is greatly diminished, because the air can no longer carry off the perspiration so freely. Apparently from this extensive absorption, we find the inhabitants of marshy and humid districts remarkable for the predominance of the lymphatic system, as has long been remarked of the Dutch; and as malaria prevails chiefly in situations and seasons in which the air is loaded with moisture, and is most energetic at periods when absorption is most active and moisture is at its maximum, the probability of its being received into the system chiefly by cutaneous absorption is greatly increased, and the propriety of endeavoring to protect ourselves from its influence by warm woollen clothing becomes more striking. In the army and navy, accordingly, where practical experience is most followed, the utmost attention is now paid to enforcing the use of flannel and sufficient clothing, as a protection against fever, dysentery, and other diseases, particularly in unhealthy climates. In the prevention of cholera, flannel was decidedly useful. * * * * * *

The advantages of flannel as a preservative from disease in warm as well as in cold climates are now so well understood, that in the army and navy its use is cogently, and with great propriety, insisted on. Captain Murray, late of H. M. S. Valorous, told me that he was so strongly impressed from former experince with a sense of the efficacy of the protection afforded by the constant use of flannel next the skin, that when, on his arrival in England in December, 1833, after two years' service amid the icebergs on the coast of Labrador, the ship was ordered to sail immediately for the West Indies, he ordered the purser too draw two extra flannel shirts and pairs of drawers for each man, and instituted a regular daily inspection to see that they were worn. These precautions were followed by the happiest results. He proceeded to this situation with a crew of 150 men; visited almost every island in the West Indies, and many of the ports in the Gulf of Mexico; and, notwithstanding the sudden transition from extreme climates, returned to England without the loss of a single man, or having any sick on board on his arrival. In the letter in which Captain Murray communicates these facts, he adds, that every precaution was used, by lighting stoves between decks, and scrubbing with hot sand, to ensure the most thorough dryness, and every means put in practice to promote cheerfulness among the men. When in command of the Recruit gun-brig, which lay about nine weeks at Vera Cruz, the same means preserved the health of his crew, when the other ships of war anchored around him lost from twenty to fifty men each.

That the superior health enjoyed by the crew of the Valorous was attributable chiefly to the means employed by their humane and intelligent commander is shown by the analogy of the Recruit; for although constant communication was kept up between the latter and the other ships in which the sickness prevailed, and all were exposed to the same external causes of disease, yet no case of sickness occurred on board the Recruit. Facts like these are truly instructive, by proving how far man possesses the power of protecting himself from injury, when he has received necessary instruction, and chooses to adapt his conduct to his situation.

* * * * * *

For those who are not robust, daily sponging of the body with cold water and vinegar, or salt water, is the best substitute for the cold bath, and may be resorted to with safety and advantage in most states of the system; especially when care is taken to excite on the surface, by the subsequent friction with the flesh-brush or hair-glove, the healthy glow of reaction. It then becomes an excellent preservative from the effects of changeable weather. When, however, a continued sensation of coldness or chill is preceptible over the body, sponging ought not to be persisted in: dry friction, aided by the tepid bath, is then greatly preferable, and often proves highly serviceable in keeping up the due action of the skin.

Historical and Descriptive Account of Persia, from the earliest ages to the present time. By *Jas. B. Fraser, Esq.* 1 vol. Harper's Family Library.—Any one who has been hurried through the vivid and deeply interesting pages of "*The Kuzzilbash*," by the varied scenes of peril, and stirring pictures of oriental life, detailed by the bold adventurer, will allow that the task of compiling the present work could hardly have fallen into better hands than those of Mr. Fraser. Sir John Malcolm's book, indeed, must ever remain a standard work upon this interesting country, and Porter and Morier (the author of the new novel, Ayesha) will always be read by those who wish to obtain a minute account of the antiquities of Persia, but none of them, wo venture to say, have brought together such a variety of information in relation to the resources of Government, Natural History, and character of the inhabitants, as is here detailed by Mr. Fraser.—The reason—a very simple one—it is due to these eminent writers should be stated. Mr. F. has boldly and liberally availed himself of their labors; and we may add, of those of almost every other author that has written upon Persia. A personal acquaintance with many parts of the country, and a residence there, we believe of some years duration, has made him so master of his subject, that he is enabled to collect the various and sometimes contradictory matter from these various sources, and, passing it through the crucible of his own mind, produce a result at once clear and satisfactory. The Messrs. Harper have certainly been very fortunate of late in the works selected for their Family Library. Two books like those of Combe and of Fraser, within a few weeks, make no mean contribution to one's sources of instruction and amusement. †

The North American Review, No. LXXXIV.—July.—It is with equal pride and pleasure that on each returning quarter we still find this excellent publication stoutly holding its way, and maintaining, amidst the existing degeneracy of criticism, a vigor of style, and ifidependence of tone, that remiuds one of the palmy days of the old Edinburgh. The present No. contains, we think, more than the usual variety of articles, and there are one or two—particularly that on "the Free Cities of Flanders"—to which it may be advantageous to return, and make the subject of future comment.

In the meantime, we will confine ourselves to one, the subject matter of which is somewhat lighter, though we apprehend hardly more familiar to many of our readers. We find some very clever observations on "the Life and Writings of Crabbe," which do not read the less agreeably, that we have not forgotten the exquisite criticisms of Jeffrey, made at the time the different works of this highly original author appeared. The poetry of Crabbe, we are inclined to believe, will never become popular in this country. Our idea may be fanciful—but we believe it too *practical* for our people—too much of every-day life, for an every-day-life people—who, when they do take an excursion into the realms of fancy, delight just as much in the gay flutter, the dance of scarfs and pennons, the gleaming of lances, and the clang of the herald's trumpet in one of Scott's or James's tournaments—or, changing the scene for one still more sumptuous, the citron groves and roseate bowers that Moore's voluptuous fancy loves to revel in—delight in these, we say, full as much as the rich and luxurious noble, who dwells so earnestly upon Crabbe's pages, because they paint life wholly different from what he sees it around him. The writings of Crabbe we hold to be a perfect *tonic* for an indolent, luxurious-minded man—agreeable, from their stimulating properties, and wholesome in their effect. But, he who has to toil and wriggle through this pheezy world, with hundreds among the panting and sweating creatures around him, to prevent his forgetting the coarser traits of humanity, requires no such vigorous mental applications as Crabbe's forbidding pictures of life, to make him remember his share in its concerns—and when he flings off the trammels of business to amuse himself for an hour, if Poets are his companions, he selects those that will bring other muscles of his mind into play than those which have just been over-exercised. He delights in abstract delineations of the play of human feelings on Byron's wandering page. He gives a gloveless hand to the hearty gallants, half knight and half freebooter, in Scott's stirring lay. He flirts in a Paphian bower with Moore's meritricious muse, or he watches the woodland shadows move, and hears the leaves whisper in one of Bryant's delicious groves. And yet we like Crabbe: he is the great utilitarian poet of the age,—the first that ever stripped from the real ills of humble life the absurd and injurious veil that the pastoral poets had thrown around them. Absurd, because characters and situations like those in Pope's pastorals, for instance, are as true to the laws of mental, as is the conformation of a mermaid to those of corporeal phisiology. Injurious, because by softening the asperity of the ills endured by the humble poor, in the eyes of those more happily situated—their charities would be blunted, and their thankfulness to heaven for their own enviable lot abated. We do not doubt that many a reflecting Englishman has gone, from the perusal of Crabbe's Tales, into an immediate examination of the Poor Laws of his country. †

Littell's Museum of Foreign Literature and Science and Art—for July. Carville.—A bold and characteristic sketch of O'Connell and Shiel, form the frontispiece to this number, which contains a very good selection of articles. One of these from the Foreign Quarterly tries to be quite sharp upon our countryman, Dr. Dekay, because, in speaking of the English, he adopts the vein of Muskau and Haussez, rather than the self-adulatory tone of one of the modest Islanders themselves. Another paper from the same publication (we wish it was more known among us,) contains a most interesting view of Swedish periodical literature, from which we make an extract, that would do well in an appendix to Knickerbocker's History of New York.

We feel hugely tempted to leave these simple, but curious, and to our mind, interesting annals of Scandinavian discovery to the reader's consideration,

even as he now has them, neither troubling him with any of the multifarious disquisitions they have produced amongst the learned of Sweden and Denmark as to the precise points of the North American coast to which they refer, nor balancing the rival pretensions of Newfoundland, Baffin's Bae, and Labrador, of Virginia, and of every State lying between the mouth of the Potomac and the St. Lawrence. As the Norwegians have not as yet advanced any claim of proprietorship, founded upon prior discovery or occupancy, no question of political importance is involved in that of disputed locality; and old Sturleson's account is too plain and straightforward, we think, to admit any doubt of his voyages, at least those of the Erikson race having reached a southern latitude without fixing the precise degree. The only part of his narrative that appears to us at all perplexing, is his describing the natives of his Vinland as Esquimaux. This difficulty Schroder solves by the supposition, that the Esquimaux may formerly have possessed a larger portion of the continent, and been subsequently driven northwards from the more genial regions by the Red Men; and assuredly we know nothing of the early history of the New World that should justify our rejection of the hypothesis as impossible. But it is to be observed, that such indications of a different race of inhabitants from the present Indians, as have yet been found in North America, lead to the conjecture, that the predecessors of the Red Men were more civilized, not more barbarous, than themselves. We must refer this question to Transatlantic antiquaries, offering, however, to the general reader this one additional suggestion, that to the fair, stately, and arrogant Northmen, all savages might seem sufficiently alike, to make the description of those they knew best answer for the better looking strangers. And now, after expressing our wonder that the whole Greenland colony did not transplant itself bodily to the fair and fruitful Vinland, where, as their numbers would assuredly have enabled them to resist the *Skraelingr*, they might have lived in comfort, we proceed to the later connexion of Scandinavia with the New World.

About the year 1625 one Wilhelm Usselina, or Willam Ussling, (for his name is written both ways) an Antwerper, said to have been in some way connected with the Dutch West India Company, proposed to Gustavus Adolphus of Sweden to establish a Swedish commercial company, upon similar principles with the Dutch, for the creation of a trade with America, and the advancement of the general commercial prosperity of Sweden. The ardent and patriotic monarch was pleased with the suggestion, and granted a privilege or charter for the incorporation of such a company, under the title of General or Southern Company, which is dated the 15th of June, 1646. In this company his Majesty's own royal self became a partner, the queen-mother, together with the chief of the nobles and bishops, to say nothing of official personages, municipal dignitaries, and the inferior clergy, following his example. In his more proper kingly capacity, Gustavus Adolphus was to receive both a duty of 4 per cent. and a fifth of all minerals, with the tenth of all other colonial produce, while Ussling's services were to be rewarded with one-tenth per cent. upon all purchases and sales.—The following year this charter was sanctioned by the national diet; but the foreign politics of Sweden, especially the share taken in the Thirty Years' War by Gustavus Adolphus, and afterwards that great king's untimely death, had nearly strangled the scheme in its birth. Subsequently, however, at the instigation of one Peter Menewe or Menuet, a Dutchman, and a discarded servent of the Dutch West India Company, Axel Oxenstierna, the great Swedish chancellor and statesman, revived the project, and declared himself president of the company, and obtained from Charles First of England, a cession of all British claims to the land upon the banks of the Delaware.

"Well supplied with colonists, provision, ammunition, and merchandize adapted for barter with, or presents to the Indians, Menuet was despatched from Gotheborg (Gothenburg) with two vessels; in the spring of 1638 he reached the mouth of the Delaware, and landed in what is now the State of that name, near Cape Henlopen, which he called Paradise Point, and the scite of the present Lewis Town, Paradise. A district of country extending from that point up the Delaware to Santickan Fall, (now Trenton in New Jersey,) and thence as far inland as was desired, was purchased of the Indians as the perpetual property of the crown of Sweden. The treaty was drawn up in Dutch, and the Indians set their hands and marks thereto. Payment was made in awls, needles, scissors, knives, hatchets, guns, powder and ball, (the Swedes were less cautious than the Norwegians,) blankets and coarse cloths. Land-surveyer Kling, who had accompained the colony, measured and mapped the country. It was named *Nya Sverige*, (New Sweden,) and its boundaries were marked by posts set in the ground. In length it was something better than twenty Swedish miles, and in breadth unlimited, or, extended as far as the purchasers chose. Upon the hill beside the present Wilmington in Delaware, Menuet founded a fortress, named after the then reigning Queen of Sweden, *Christinæ Skans* (Christina's Castle.) The Hollanders, who were settled upon the River Hudson, had once had some forts even upon the Delaware, whence they had been driven by the Indians, who had utterly destroyed their buildings. These Dutchmen kept some of their number nevertheless constantly resident upon the eastern bank of the Delaware, to watch the movements of whoever should visit those parts. Their purpose was to secure at least the peninsula (now New Jersey) between that river and Nieuw Amsterdam (now New York.) As soon as it was observed that Menuet was laying the foundation of a castle, the Director-General of the New Netherlands protested against the act in the name of the Dutch Company, upon the ground that the river belonged to them. But these remonstrances produced no effect upon Menuet, and on the Dutchmen's side the matter did not for some time proceed beyond words."

The Swedish colony was henceforward managed much like the colonies of other nations. An attempt was made to transport convicts thither, but we are told that "the neighboring nations and the Indians" so much disliked the measure, that the first jail cargo was returned upon the hands of its shippers, and the idea was given up. Speculations in silk, wine, and salt were set on foot, and the company were endowed, after many changes of plan, with a monopoly for supplying the mother country with tobacco.—Meanwhile New-Swedish towns were building, not only in the present New Jersey, but also in what is now Delaware, Maryland, and Pennsylvania. We are told,

"In this direction the Swedish possessions extended to the great falls of the Susquehannah, in the present Pennsylvania, of which the first European cultivators were Swedes. With the Indians they lived upon good terms, and learned their language, but with the Hollanders incessant disputes arose.—Our countrymen considerd themselves as the rightful owners of the land they had bought, and resisted the pretensions and invasions of the Dutch. These again complained of the intolerable arrogance of the Swedes, who, they averred, paid no more attention to Dutch protestations than 'if a cow should fly over their heads.'"

This beautiful illustration is ticked off in the original, as though extracted from some Hollando-American state paper or other document, and we have carefully tradscribed the marks, because, if the figure of speech be at all applicable, we must say it makes strongly against its employers. If the Swedes paid *as much* attention to the Dutch protests as they would have paid to a phenomenon so awful and so unwonted as that of a flying cow, (some vague nursery remi. niscences of a cow reported to have jumped over the moon cannot invalidate the adjective "unwonted,") we should pronounce them the most attentive, and most polite too, of diplomatists. At least for ourselves, we confess, that not all the possible proctols which could be concocted by all possible conferences, nay, we believe no political occurence short of internal revolution or foreign conquest, would commote our inward man a half, or a hundredth part as much as the sight of one of the "milky mothers" who daily perambulate the environs of London, gently rising from the road, yard, or field, and hovering over our own individual heads. But our present business not being to criticize Dutch reasoning or Dutch eloquence, we return to the colonial dissensions between the two nations.

"'Should the Sweedish governor'—writes Adrian van der Donck, (we suspect, but cannot positively assert, the brilliant inventor of the flying-cow comparison,) 'receive reinforcements in time, we shall have more trouble with him than we had with the English or any of their governors.'"

The government at Stockholm does not appear to have duly exerted itself in behalf of the active colonists, not even supplying means of conveyance for those who were eager to seek, cultivate, and defend the new and more fertile Sweden. The Dutch built Fort Casimir on the western bank of the Delaware, despite the earnest protestations of Printz, the second governor; and he, in despair at the neglect under which his promising colony languished, committed his authority to his son-in-law, Papegoija, as vice-governor, and in 1652 returned home. In 1654 Papegoija received the long-looked-for reinforcements, and Rising, who came out with them as governor's assistant-counsellor, and secretary to the College of Commerce, immediately upon landing took Fort Casimir. Papegoija now made over his authority to Rising, who, assuming the Dutch title of Director-General, concluded a new treaty of closer friendship with the Indians, during the negotiation of which, we are told that the interpreter employed by the Swedes being graced with a magnificent beard, the bald-chinned aborigines insisted that he should shave off one half the honor of his manhood ere he should presume to exercise his office on their behalf.

But the Dutch yielded their possessions only to such as were too strong for them, which the Swedes were not. In the course of the following year, troops were despatched from the United Provinces to Nieuw Amsterdam, at the head of which Governor Stuyvesant first recovered Fort Casimer, then compelled Rising to capitulate in *Christinæ Skans*, and finally overran the colony, leaving the colonists no choice except that of selling their property, or taking an oath of allegiance to the States General. A few Swedes and one Finn became Dutch subjects, rather than abandon their new homes; but the greater number, remaining temporarily for the avowed purpose of selling their property, managed, in conjunction with the Indians of New Sweden to maintain themselves in a sort of independence during the short remaining period of Dutch Sovereignty in North America. Lars Lock, the Lutheran clergyman who had accompanied the pious Swedes at the very first founding of the colony, remained with his flock; and the Hollanders, who had been less diligent in supplying their spiritual than their corporeal wants, now participated in his pastoral care.

Rising, upon his return to Sweden, vehemently urged the government to recover the colony. But Charles X. who now wore Christina's abdicated crown, was engaged in wars that fully occupied his resources. He therefore merely endeavored to obtain from Holland, by negotiation, some compensation for his overthrown company, and abandoned all pretension to *Nya Sverige*. It did not, however, long remain under the government of the United Provinces. In the year 1664 the English took the Dutch colony, subduing alike conquerors and conquered; and the new masters of the province readily allowed their Swedish subjects the free exercise of their religion.

THE MECHANICS' MAGAZINE, Vol. IV. No. 1, for July, contains upwards of *fifty articles*, several of which are exceedingly well prepared.

THE NEW ENGLAND MAGAZINE and THE KNICKERBOCKER, for August, are both already upon our table; but though well pleased with their contents, we must wait till the American Monthly comes to hand, before we examine them here. In the mean time, we quote from the Knickerbocker some floating memoranda, which invite attention, as bearing the initials of the venerable Mathew Carey, of Philadelphia.

Don Quixote.—It is not generally known, that a long period intervened between the appearance of the first and second parts of Don Quixote. Cervates, it is supposed, had no intention of continuing his work—but finding that some person had published a spurious second part, he felt indignant; set fairly to work, and produced the second part, which completes the story of his hero. When young, I read the spurious edition in French. D'Israeli, who was given us in the Curiosities of Literature some anecdotes of the author and his work, makes no mention of the spurious second part; and it is therefore presumable that he was ignorant of its existence.

A successful appeal.—Bell, a Scotch bookseller in Philadelphia, who flourished during the revolutionary war, published a number of pamphlets, and some books, which he sold at exorbitant prices. A person came into his store one day, and asked for a pamphlet of less than one hundred pages, for which Bell asked a hard dollar; whereas a hard half a dollar would have been its full value. The person was surprised at the exorbitant demand, to which he made some objection. Bell took the pamphlet from the counter, and was about to place it on the shelf, saying, with a very pompous and significant air, "Sir,

this book was *made for gentlemen*." This tickled the vanity of the purchaser, who, not to lose his claim to that proud title, threw down the dollar, and took up the pamphlet.

'*Manner and Matter.*'—Virgil's celebrated sentence,

"Gratior est virtus veniens in corpore pulchro."

applies to books as well as to human virtue and "the human face divine." There can be no doubt that a very elegant edition of a work will make incomparably more impression on the mind, than the same work, ill printed and on bad paper. The first time I ever was struck with this idea was at the sight of a splendid edition of that delightful work, the Economy of Human Life, adorned with elegant engraved vignettes and tail pieces; a work, of which, it is true, I always thought favorably—but its beautiful morals made a much deeper impression on me, when I saw them in their court dress, "in corpore pulchro," than when they appeared in the dishabille in which I had been accustomed to behold them. The same idea often forcibly struck me afterwards—and on consulting a lady of a refined taste, she perfectly agreed in the theory. Whether, however, it is not merely fancy, may perhaps be questioned.

'*Satisfaction.*'—Dean Swift had a quarrel with a pompous, pragmatical attorney, on whom he determined to have satisfaction by his pen. Accordingly he turned Æsop's fable of the apples and the odure into verse—and when he came to the address of the latter to the former,

"How we apples swim,"

he subjoined—

"Thus at the bar, that booby Bettsworth,
Though half a crown outpays his sweat's worth,
Who knows of law, nor text, nor margent,
Calls Singleton his brother Sergeant."

Singleton was a first-rate lawyer, who stood as high in Dublin as our Binneys and Sergeants do here.

Bettsworth, stung to the quick, went very pompously to Swift, and holding out the paper, asked him, with a menacing voice and gesture: "Sir, are you the author of this infamous attack on me?" "Sit down, Sir," says Swift, very calmly—"Do not be in a passion, but let me tell you a short story.—When I was young, my dear father—heaven rest his soul!—seeing that I had a turn for scribbling, and fearful of the consequences, one day told me that he was afraid that propensity would some time or other bring me into trouble. 'And, my dear son,' added he, 'let me give you a piece of advice.—Should any libellous matter appear in any newspaper, and any *fool or knave* call on you to demand whether or not you are the writer—say no;'—and therefore, Sir, I say no to you." Bettsworth had no remedy, and went off grumbling—saying Swift was like one of his own vile Yahoos, besmearing people with his filth, and out of the reach of punishment.

Cardinal Wolsey.—All who know any thing of his history, know that he was proud and ostentatious, and accustomed to the use of gorgeous costume, in which he piqued himself in outshining all the other courtiers of Henry VIII. One day, a prodigal nobleman, who was deeply in debt, and paid nobody, came into court in a dress, the splendor of which outshone that of Wolsey, who being piqued, addressed the noblemen, and said, "My Lord, it would be more commendable in you to pay your debts, than to lavish so much money on your dress." "May it please your reverence," replied the nobleman, "you are perfectly right: I humbly thank you for the hint, and now make a beginning, to show how I value your kind admonition. My father owed your deceased father a groat for a calf's head: here is *sixpence—let me have the change.*"

Old Clocks.—I love to contemplate an old clock—one of those relics of by-gone times, that come down to us wrapt in veneration—telling their tale of simple yet touching interest. How erect and prim it stands in yon corner, like some faded specimen of maiden antiquity! Its face bears evident marks of beauty—of beauty decayed, but not obliterated. It is plain it has seen its best days, but equally evident is it that it was the pride and ornament of its day—unrivalled among its companions. How many eyes have watched the even tenor of its ways, as it moved on in the never-ending yet still beginning journey of the hours. Hours! aye, years have gone by, since that aged monitor of time first started on its course. And they who sat out with it, in the morning of life, whose motions were as active, and whose principles of vitality—if that may be called so which animates a clock—were as strong—where are they? Do they yet linger in the walks of the village? Can they be seen under the old oak tree, or at the door of the cottage? I see them not there; yet there stands the old clock, clicking blithely and patiently as ever. The voice and footsteps are silent of those who journeyed up with it to the period of a good old age. A new race has sprung up, long and far removed from the other; and as they too watch the progress of the old clock, their hours are fleetly passing by, and time with them will soon be at a close. How impressive then the lesson taught by that old clock, and the simple inscription on its dial-plate——"*Tempus fugit.*" †

FOREIGN INTELLIGENCE.

From Europe.—By the packet ship Hibernia, Capt. Wilson, which sailed from Liverpool on the 1st of July, we have received our regular files of English papers up to the day of her sailing. There is no news of special importance. Spain and Portugal are gradually becoming quiet, and the question between Holland and Belgium is again said to be on the point of being decided. In France, the election returns are generally in favor of the Government; but almost all the opposition Deputies of eminence, who had lost their elections in those places where they were first candidates, had subsequently been elected in others. M. Lafitte had been returned from Rouen, and two other places. Odillon Barrot and Dupont de l'Eure have also secured seats.

The Moniteur contains the provisional treaty of friendship, commerce, and navigation, between France and the Republic of New Granada.

M. de Chateaubriand has published a letter. He had not been elected by any of the Carlist colleges, and now declares that had he been chosen he would not have taken the oaths.

In England it is now understood that Parliament will not rise till the second week in August. The debates in that body are confined almost exclusively to local questions.

On the complaint of the Lord Chancellor, the printer and editor of the *London Morning Post* had been brought before the House of Peers, for a libel on the Chancellor. The printer had been discharged, but Mr. Biddleston, the editor, was under examination when the last accounts came away.

The subject of Post Office reform had been taken up, and excited considerable discussion in Parliament.

The British government has resolved to form a new settlement on the southern coast of Australia, near Spencer's Gulf, which contains a harbour, named Port Lincoln, of sufficient capacity to contain in its three coves all the navy of England.—Captain Stuart, of the 39th regiment, reports that 5,000,000 acres of the richest land he ever saw approximates on St. Vincent's Gulf, and abuts on the Murray River, which is navigable for large craft for 100 miles in an easterly direction; Kangaroo Island lies off the entrance of these two gulfs, and abounds in salt, fish, seals, kangaroos, and possesses a good soil. The whole lies in latitude from 34 to 36 S. and in longitude E from 136 to 140. An interesting feature in the establishment is, that all the land is to be sold, and the produce is to be expended in the encouragement of agricultural families to emigrate. It is, according to the evidence of several officers who have examined it, a land of corn, wine and oil.

Dreadful Fire and Great Destruction of Human Life: fifteen persons killed and burnt to death.

Oldham, 30th June.—On Saturday morning last, about two o'clock, a most dreadful fire took place at the Union Mills, about a mile from Oldham, belonging to Mr. Lea Birch. The cause of this great calamity appears to have thus originated:—A machine-maker, whose lathes, &c. were turned by Mr. Birche's engine, and whose shop adjoined the cotton mill, was very busy, and was permitted, in consequence, to have the use of the engine during the night. Some part of the mill-wright work, by which his lathes, &c. were turned, wanted oil or grease, and as the speed was great, the shaft-necks or bearings became heated, and thus set fire to the place.—Although the fire-engines and military were soon on the spot, they were found both to be perfectly useless, the fire having in the mean time made such rapid progress. As to the cause of such waste of life, the following may be depended upon:—A young man, in rather an early part of the fire, by the falling of some part of the building and machinery, had got entangled by the legs, and he could not extricate himself. This being seen by the bystanders, excited, as may be supposed, their feelings in the highest degree, and, throwing aside all fear and all prudence, too, every one seemed foremost to assist in saving the poor fellow from a roasting death. Whilst thus laudably employed, a wall unexpectedly fell, and buried 15 in the ruins, besides many others being seriously injured. At 3 o'clock on Saturday, only 7 bodies had been dug out; since that time 7 more have been found—some presenting a spectacle too horrible to behold: some without head, others without both head and legs, and some without either head, legs, or arms. But I must drop a narrative like this. The parties thus suddenly snatched away are chiefly young persons. The destruction of the property is most complete. The amount of damage has not been ascertained: the property, both machinery and buildings, were insured, and it is believed fully. There were many hands employed, all of whom, who have escaped, will have to find fresh employers, which the hands will regret, inasmuch as this mill was by the hands generally deemed a first rate mill for the employed.

Don Carlos, of Spain, family, and suite, had left Portsmouth for Gloucester Lodge, Brompton, which had been hired for their residence. His other attendants, 160 persons, had gone to Hamburg.

The honest Spanish Patriot, Gen Mina, was complimented with a splendid dinner at the Albion tavern, London, given to him by noblemen and gentlemen, on the 29th ult. The full account of this dinner occupies nearly two column of the Morning Herald, for which we have not room.

Ireland, June 27—*Dreadful Affray and wholesale Slaughter in Kerry.*—One of the most sanguinary faction fights that ever disgraced this unhappy country, took place on Tuesday at the races of Ballyheag, 13 miles from Tralee, between two clans, the Cooleens and the Lawlors, who have been at feud above half a century, and still defy both the law and the gospel, in taking vengeance of each other whenever opportunity offers from generation to generation. Rumors of the intended fight having been in circulation some days previous, and information having been given to the country magistrates, they applied to the officer commanding at Tralee, for a force sufficient to keep the peace at the races. Accordingly, on the day previous, (Monday) a strong detachment of the 69th Regiment with three officers marched from Tralee barracks to Ballyheag, and on Tuesday took up a position on the race-ground, on the bank of the river Cashen, to be ready to interfere on the first symptoms of the expected riot.—The two factions soon appeared on the ground in great numbers, but remained quiet until the races were over, at 3 o'clock. Then the appointed battle began in earnest on the river strand with sticks and stones. A gentleman who witnessed the contest describes it as one of the most savage and merciless scenes he ever witnessed or could imagine to have taken place in a Christian country. The soldiers could do nothing to stem the torrent of fury and blows that raged on every side. At least 1,000 men were engaged; for in addition to the resident parties, numbers came from miles around to take part in the conflict against men whom they had never seen before; all for the pleasure of a fight!

Portugal.—By the Pike Packet, from Lisbon on the 15th, and Oporto on the 19th, arrived at Falmouth, which is the bearer of several passengers, both Carlists and Miguelites, we have the Chronica de Lisbon to the 14th instant. In the number of the 11th there is a despatch, addressed to the Marquess de Saldanha, relative to the National Battalions, which states, that although, by the decree of the 10th of June, 1832, their services were obligatory only until the termination of the civil contest, yet seeing the state of disorganization consequent upon that contest, and the time necessary for the formation of a national guard, the Minister of War felt assured that these battalions would be impressed with the necessity of maintaining their present organization until a national guard, of which they would form a part, should be embodied: their services, in the meantime, being restricted to reviews, religious and national festivities, and to such extraordinary circumstances as should be indicated by special order from the Minister of War. The Chronica of the 13th contains the regulations approved by the Regent for the government of the Society of Primary Instruction, to which we yesterday alluded, and from which we extract so much as relates to the object of the institution.

It is said of the new Chancellor of Oxford, that he has already transacted more actual business of the University than his predecessor during the whole of this official career.

The Dean and Chapter of Exeter, in new paving and beautifying their ancient cathedral, found the leaden coffin of Bishop Bitten, who died in 1307. Near the bones of the finger was discovered a sapphire ring set in gold, in the centre of which is engraved a hand, with the two fore-fingers extended in the attitude of benediction.

Several heavy failures among the houses engaged in the grain trade have occurred in Glasgow. It is understood that one of these is to a very considerable amount.

It is amusing to see the name of Joseph Bonaparte among the stewards for the dinner given to Mina, who became the idol of his countrymen in consequence of his determined opposition to Joseph's pretensions as Sovereign. Who could have anticipated such a circumstance in 1810!

There are at present living in the small village of Heighington, in the county of Durham, where the population does not exceed 400 or 500 souls, 24 individuals, whose united ages amount to 1,977 years. The oldest is 90, and the youngest 79 years of age.

Mr. Pea Green Hayne has been discharged from he Insol vent Court. The debts named in his schedule amount to £20,995. He proved that for many years past he had lived under very prudent management, but the folly of a former period bore him down.

The election for Edinburgh took place lately, when Mr. Abercombie was returned without opposition.

A new valuation of the West Riding of Yorkshire has just been completed for the county-rate assessment. The town of Leeds, which, in 1816, was assessed at £90,000, is now valued at £190,000, and the other large towns have been proportionately increased.

The Duke of Wellington, it is said, has expressed his determination to adopt some strong measures to check the destructive system of credit hitherto so ruinously permitted among the students at Oxford.

During the past year. the receipts of the Society for Promoting Christian Knowledge have been rather more than £74,000, the expenditure $72,000.. The publications have amounted to 2,152,000 including 82,000 Bibles.

An explosion of 60lbs. of powder took place on Friday week, at Dartford Mills, by which a man named Bennett was dreadfully burnt, and three other workmen slightly wounded. During dinner hour, the workmen amused themselves in a meadow where the steam-engines were situated, when a ball on which some gravel had collected was struck into the mill, and rolling under a five tons stone, produced so much friction as to cause explosion.

Mr. Powell, the unhappy gentleman who shot himself, in consequence, as it has been supposed, of hearing of the death of his son through a fall from his horse at Ascot, had the affliction of losing all his sons, five in number, in the course of a year. The remains of the last were consigned to the new cemetery in the Harrow-road, London.

The House and estate of Mr. Wilberforce, at Highwoodhill, near Hendon, Middlesex, are at present on sale. The situation is one of the most beautiful in the neighborhood of London.

Lord Huntingtower has set out 38 gardens for the labourers of Great Ponton, and it is his intention to follow the same laudable plan upon his estates in other parishes.—[Stamford Mercury.]

The Vienna Congress closed its proceedings on the 12th instant.

It appears by the German papers, that the English Mediterranean squadron is again making hostile demonstrations against Turkey, on the surface, but Russia at the bottom, and that a French fleet is hastily fitting up to co-operate.

Don Miguel sailed from Cascaes Bay for Genoa on the 6th instant, in the Stag, accompanied by the Nimrod. Admiral Napier gets £16,000 prize money by his gallant capture of the Miguelite fleet.

A curious statement has been published by one of the papers in Madrid, respecting the number and revennes of the Spanish clergy. From it, it appears that the number of buildings appropriated to religious purposes throughout Spain, is 28,249; that that of the clergy is 159,392, and that of the friars and nuns 96,878. The entire amount of the ecclesiastical revenues is calculated to be $50,000,000, and of this sum the part consumed by them is shown to exceed the whole revenue of the State, by some $8,000,000.

M. Dupin, in a letter to a friend at Paris, says "I cannot conceive why the English should be, reckoned a grave people. Everywhere I go I see none but people bursting with laughter."

"Taking for Granted," is the title of a new work upon which Miss Edgeworth is at present engaged, and which will soon be given to the public. We take it for granted that it will be looked for with a good deal of interest.

M. Sismondé, the historian of the Franks and the Italian Republics, in publishing a History of the Fall of the Roman Empire, in two volumes, for Lardner's Encyclopædia.

The corporation of Madrid have paid a handsome compliment to the memory of the great Cervantes, by erecting a handsome marble tablet on the house where he resided, in the Calle de los Francos, and which chances to be that in which Mr. Scott, the Attachee to the Legation, at present lives.

The Duchess of Berri has. it is stated, at last signed a formal act of renunciation of the guardianship of her son, the Duke of Bourdeaux. This, it appears, was insisted upon by Charles X., upon the occasion of her last visit to Prague, and in consequence of her marriage. Notwithstanding all that has been said, there is every reason to believe that Mad. Luchessi Palli is in *mauvaise odeur* with the rigidly moral *doctrinaires* at Prague, where her indiscretions are more deprecated than any other misfortune which has befallen the legitimate cause.

Ibraham Pasha at Nazareth.—One of the most curious circumstances that I saw in Nazareth was Ibraham Pasha's visit to the church of the Convent, where, in a grotto, having a double exit and under the high alter, the friars show the spot which they call that of the incarnation. He examined all the church with proper attention, and appeared much struck with the splendid vestments, the gifts of European sovereigns, which, he said, far exceeded any thing worn by the Moslems. He promised that the convents should be treated with justice. This visit to a Christian church before he went to the Mosque in the town is said to have been dissatisfactory to some rigid Mahommedans, but Ibraham appeared not to regard their prejudices.—[Letter from Damascus.]

Correspondence of the Journal of Commerce.

U. S. Schr. Shark, Marseilles, *28th May*, 1834.

We started from this place on the 16th, leaving the Delaware, 74, and Constitution frigate there; but we were doomed to make an early return, by having run foul of the French steam vessel of war, "Rapid," in what we considered a shamefully careless manner; or what is worse, intentionally. Had she *designed* the encounter, it could not have been done more effectually than it was, or more damage inflicted upon us. We had beaten out the Bay of Toulon, and were about doubling the Cape which forms the Bay, and this steamboat was going in; of course before the wind. She had therefore the choice to pass astern of us; or if a contact was probable, to stop her wheels and let us pass sufficiently ahead to be entirely free of collision. The Rapid continued to approach us, and *rapidly* too; for she had full steam on, besides the power of the wind and sea forcing her towards us; and evinced a determination on the part of her Commander to pass *ahead* of us, of which, when we were aware, it was too late to tack, because we would have luffed directly into his vessel, and given plausible appearances of *intentional* contact on our part. We therefore pursued the only course left, by keeping away, though on a lee shore, and were using our utmost efforts to avoid her, when she finally struck us; carried away our flying-jib boom and rigging attached; then dropping astern, she struck our fore-chains, being thrown upon us by a heavy sea, and carried away the main rail, besides injuring the channels and altering the shape of our bulwarks there. With the next sea she was thrown upon our main chains, and did nearly the same mischief there. Having thus done us all the harm he could, he began to retrograde with the paddles of his (too well known to us) Rapid, and was soon clear of us: he would not even burst his boiler for our satisfaction, and took good care to injure his vessel as little as possible. What manifested mostly a malicious intention on the part of the Commander of the steamboat, was his not stopping her wheels until *after* she struck; when he must have known a short time before the meeting, that such was inevitable. We made the best of our way back, and with the assistance of all the Delaware's mechanics, we were soon refitted, (such a vessel as that, is a little world to ours,) and we finally got away on the afternoon of the 18th. Any person the least gifted with his senses, on viewing the damage done to the two vessels in the encounter, and the situation of those damages, cannot but decide that the Shark was not in the least to blame; yet this modest, *unretiring* Frenchman when called upon, ascribed with perfect non-chalance, all the blame to us. Yours, S. H. K.

[*From the Barbadian of 5th July.*]

From the West Indies.—On the 1st of August will commence the grand experiment of releasing the black population of the entire British islands from slavery. The result of a few years will go far to test the experiment of their capacity for self-government and self reliance. It is our earnest hope that it may be successful, for although the beneficial results of the St. Domingo emancipation are worse than doubtful, it does not follow as a *certain* consequence that they may not be more felicitous in the British Islands.

The qualifications of the British act of Parliament for the liberation of slaves we are not particularly informed of. One of its provisions, however, seems to be, that during the period of their apprenticeship or semi-servitude, the power of inflicting corporal punishment upon them is taken away from the master and conferred upon the Magistrates. In reference to this subject, the Barbadian of the 29th June remarks:—"Near as the 1st of August is, we think that proprietors would rejoice at this plan being at once the law—but with the slaves generally we apprehend the alteration is unpalatable. They seem to dread this change of authority. We have heard of one respectable proprietor having explained to the slaves under his charge the approaching change of system; and on his proposing to them to give up at once the power of punishing them himself, and referring to them, they one and all expressed their aversion to being complained of before a magistrate, and begged him to continue to exercise his own authority, and to punish them in his own way if they offended. The time is coming when justice—tardy justice, will be done to the general character of the slave proprietors."

In Antigua, the eventful first of August has been set apart by a Proclamation for solemn religious observance, in commemmoration of the unqualified freedom of the slaves which then commences. The legislature of that Island convened on the 6th June, and the bill that had been passed for the unrestricted freedom of the slave population received the sanction of the Governor on the 14th of the month.

SUMMARY.

Harvard University.—The President of this institution has submitted a report of its recent difficulties to the Board of Overseers, convened at the Council Chamber, in Boston, and the report was referred to a committee consisting of Messrs. J. Q. Adams, Levi Lincoln, B. T. Pickman, A. H. Everett, and the Rev. D. Codman. This committee will report at the next meeting of the board in September.

University of Virginia.—*Charlottesville, (Va.) July* 25.—The session of the University closed on Saturday last. A large and intelligent audience attended the exercises of the public day. Three very handsome essays were read by Mr. Young of Richmond, Mr. Minor of Louisa, and Mr. Holeman of Fluvannah; three eloquent orations, the finest we ever heard on a similar occasion, were delivered by Mr. Frazier of Augusta, Mr. B. F. Minor of Albemarle, and Mr. Lindsey of Miss. They were all in the happiest style—but we have no space nor tongue for eulogy—suffice it to say, they were the best effusions of the kind we ever listened to. Various gentlemen received honors (dearly earned and richly merited.)

This noble institution is now in a most flourishing condition. Governed by able Professors, who possess in an eminent degree the capacity of stimulating others to the acquisition of science, it cannot fail, while conducted on the same wise and liberal system, which has heretofore characterized it, to bestow incalculable blessings on our country. Yearly, it will return, as it has just done, to the bosom of society, many a bright ornament—many a chivalrous and devoted patriot.

Mr. Madison recently resigned his seat at the Board of Visiters, which has been supplied by the appointment of Wm. C. Rives, Esq. Joseph C. Cabell, Esq. has been made Rector—vacated by the resignation of Mr. Madison. Dr. Warner, of Baltimore, a gentleman of distinguished eminence in his profession, and who has been for several years con-

nected with the Summer School, in that city, has been elected by the Visiters, Professor of Physiology, Anatomy, and Surgery, in the place of Dr. Johnson, resigned.

Mr. CLAY has arrived at his residence at Ashland, Ky. in improved health and spirits.

At Lexington, Ky. on the 26th ult. funeral honors to the departed Lafayette were paid, and a Eulogy on his life and character was delivered by HENRY CLAY, Jr. It was pronounced in presence of more than five thousand spectators, and the papers speak of it as an impressive and eloquent production.

Detroit.—A Detroit paper just received mentions the occurrence of several sudden deaths in that place, caused, as the editor believes, by the extreme heat of the weather and the imprudent use of cold water; and this paper takes occasion to notice and contradict the reports which had been circulated of the existence of cholera in Detroit. There is, it says, no shadow of foundation for such reports.

A Floating Village!—The Steam Boat North America, Capt. Hoyt, arrived here on Tuesday Evening, from New York with *six hundred Passengers!* A few more such boats would *empty* the commercial Emporium. With such a steamboat as the North America running for *fifty cents*, it is so much cheaper to travel, that People cannot afford to stay at home.—[Alb. Eve. Jour.]

NEW GOLD COIN.

Treasury Department, Aug. 2.

The annexed letter will enable the public readily to distinguish the new from the old coins.

As the date could not, by law, be altered, but the cap and motto might be legally omitted, and would serve plainly to distinguish the new impression, that course has been adopted at the mint till the commencement of the next year, when the motto will probably be restored, and the date of the new year, instead of the omission of the motto, will be found sufficient to indicate the change in the coin.

MINT OF THE UNITED STATES,
Philadelphia, 1st Aug. 1834.

SIR:—I have the honor to inform the Department, that the coinage of Gold, according to the new ratio of gold to silver, commenced this morning, being the earliest day permitted by the provisions of the act.

In making this communication, it may be satisfactory to recur to the peculiarities by which the new gold coins are to be distinguished from those of former issues. They are the following:

On the face, the new coins will be readily distinguished by a head of Liberty disencumbered of a cap.

On the reverse, the surplus motto "E Pluribus Unum," which for many years has occupied a portion of the disk above the figure of the Eagle, is now omitted.

These changes, independently of the facility to be derived from them, in distinguishing the future from the past emissions of our cold coins, are recommended by a nearer adherence to the provisions of the law, as well by the rules of taste and classic authority. The views in these respects, presented in my communications of the 9th ult. having met your approbation, will, I doubt not, be sustained by the judgment of the public.

In regard to the omission of the motto above referred to, the same improvement was introduced in the quarter dollar in 1831, the subject having, by communication of the 29th January of that year, been submitted to the President, through the Department, and approved.

The Eagle of the former issues weighs 270 grains, the Half Eagle 135 grains, and the Quarter 67 1-2 grains. The Eagle under the present law, will weigh 258 grains, the Half Eagle 129 grains, and the Quarter 64 1-2 grains. These weights are recited because desirable to be kept in mind, rather than as affording a farther criterion of distinction between the two classes of coins—since an inspection, much more cursory than that of weighing, will distinguish them by the preceding characteristics.

The Eagle and Half Eagle of the new coinage will be less in diameter than those of the former emissions, and that in a greater proportion than the diminution of weight would indicate. This, however, though a decided amendment of our coinage is of less value as a distinctive mark, since the comparison would requir the presence of coin of both classes.

I have the honor to be, with great respect, your obedient servant,

SAMUEL MOORE,
Director of the Mint.

Hon. LEVI WOODBURY,
Secretary of the Treasury.

Henry Gahn, Esq., Swedish consul at this port, was found dead in his chamber on Sunday morning. The body was sitting, and leaning upon a table—The death was probably occasioned by a fit. Mr. Gahn was about sixty five years of age, and much esteemed.

Western Marine.—The fine new brig Illinois, arrived a short time since at Chicago. This vessel will carry 250 tons, and is intended as a packet between Buffalo and Chicago.—[Courier.]

Thomas Moon, a waiter at Congress Hall, Saratoga, died suddenly on Saturday last, by drinking cold water. He left a large family in dependant circumstances—and as soon as the fact became known, a purse of $330 was made up for their relief by the people at the Hall.

MONTREAL, JULY 29th.—The hopes generally entertained at the end of last week of the disappearance of the prevailing malady, were sadly disappointed by a serious increase of mortality on Saturday, Sunday and yesterday, which deprived us of several most valued and estimable members of the community. We are gratified in being able to state, that a most favorable change in the general health has manifested itself to day, fewer cases, and those of a less severe description, having been seen by our leading physicians for the last twenty-four hours.

The New Orleans Bulletin of the 17th of July makes a favorable report of the health of that city.—The weather had been warm, but good health prevailed. The Bulletin concludes its paragraph with the following statement, to the truth of which the editor testifies from his own personal observation:—

"There is a matter which deeply concerns the health of the people, an abuse, which has been too long suffered to exist. If it should be told abroad that in New Orleans the water was taken up from the *Gutters* and sold to the citizens to drink, it would not be believed, yet such is the fact. We have *seen* water sellers filling their casks from the gutters of canal street. The water of the river is filthy almost beyond endurance, but with the addition it receives by washing over the rotten offals and other nuisances deposited in gutters, it must be little less than poison."

BALLOON ASCENSIONS.—[These feats of æronautic daring have become quite numerous of late in this country: several Americans having taken up the business with all the spirit, and we may say with all the success, of the most accomplished foreigners.—The mail of Saturday brought us accounts of two ascensions,—one at Washington by Mr. Ash, and the other at Boston by C. F. Durant, Esq. of Jersey City. The account of the ascension of the latter, as given by himself, in the Boston newspapers, is, from the singular intrepidity displayed by Mr. Durant, unusually interesting.]

To the Edstors of the Morning Papers:

GENTLEMEN: At 5 hours 50 minutes, by my time, I arose clear of the Amphitheatre, with barely sufficient buoyancy to keep the balloon in a horizontal position, until passing over the common, I threw over two bags of sand ballast, when the ascending power increased and the balloon rose finely, forming an angle with the horizon I judged of 30 or 40 degrees. This gradual ascent continued until 9 minutes past 6 when the barometer fell to 23:22. The view now and a few minutes previous was the most varied and interesting I ever beheld. On one side the vast ocean, with hundreds of vessels for many miles round. The ocean presented an almost unbroken surface, covered apparently with a light mist or fog, and the sun striking the sails of the vessels, gave them much the appearance of feathers floating on the smooth surface of a pond. I could perceive in the wake of those nearly beneath me, a difference in the appearance of the water, caused by their motion; it was very perceptible in the wake of a steamboat which I passed near Nahant; it had much the appearance of heavy lines in engraving, diverging at or near right angles from the ground work. This gave me an idea of their course and probable wind, which I judged was more favorable to reach Cape Ann. I descended very slow to ascertain at what height the wind would haul, yet perceiving no sensible difference until one-eighth of a mile from the ocean; here, by ranging with a schooner which a few minutes before was ahead of me, standing out under a heavy press of sail, though now she had fallen in the rear, I could perceive from her that my course within one eighth of a mile from the ocean would strike the eastern point of Cape Ann—but it was impossible to keep the balloon within that distance of the surface without a great expenditure of ballast or striking the water, or soaring above into the lower edge of the upper and more westerly current, which would have carried me to the eastward of Cape Ann; therefore I resolved on letting go both anchors to trail in the water. They struck at 6hrs. 30m. with 3 or 400lb. of cable, a few miles beyond Nahant, though the ærostat was moving with such velocity as to prevent the anchors sinking more than 10 or 15 feet from the surface, and indeed the velocity frequently caused them to skip over the surface. This gave the balloon an undulating motion, sometimes 2 or 300 feet high, and sometimes barely touching the water; by this means I was enabled to secure all the advantages of the wind, and was making a straight course for the Cape, when a heavy flaw of wind struck the balloon with such force as to throw it in a horizontal line with the car, which struck the ocean and filled with water.

My car being of open wicker work, I judged by throwing out some of the ballast the water would run out, and I should be enabled to rise clear, but it was drawn with such force that the water could not run out. This occurred at 6h. 37m. and left me partially immersed in water. Judging it difficult and dangerous to continue as far as Cape Ann in that situation, and seeing a sloop to the leeward of me, and within a quarter of a mile from the course I was taking, I judged by retarding its progress as much as possible, she would be able to intersect the line I was making, and arrest the balloon; but, instead of bearing down with the sloop, the small boat was manned, and before they could intersect my course, I was a mile beyond them.

A sheet, which I carry to fold the balloon, and my flag I had spread as much possible across the car to retard my progress for this boat. This sunk me to the waist in water, and materially increased the danger and difficulty of reaching the cape. At this time a schooner at the eastward was bearing down, and my car being so far in the water, she came up with me at 7 o'clock. I exchanged a few words with the captain, requesting he would pass me close under my lee and throw a line. I saw a man attempting to throw a dipsy line, and told them it would not hold me, when they caught up a very stout line which I made fast to the car. This line proved to be the halliards, and the schooner on the wind, with the force of the wind on my balloon, and the line drawing from mast head, carried me up 30 feet, when I descended with such velocity as to be for the first time *completely* immersed in water.

A second time I was carried up in like manner, and when about 300 feet high, a flaw of wind upturned the balloon so as to exhaust the gas in an instant. In falling, I was under water half a minute, though I had on a gum elastic life preserver, which Mr. Dorr of the Roxbury factory, had the kindness to lend me. Yet I was so entangled with the cords, that thirty seconds elapsed before I could extricate myself and come to the sorface, where I was comfortably resting myself on the life preserver, when Captain Spaulding, of the schooner Miner, of Thomaston, came to me in a small boat and took me and the ærostat on board. With so much fatigue, and having tasted nothing but water since breakfast, you may imagine, gentlemen, that I felt much relief in my new quarters.

I was shown every attention by Capt. Spaulding, who gave me clothes to shift, and soon prepared me tea, which I partook of with a fine appetite. I rested well on board, and this morning, on arriving in the harbor, Captain Spaulding had breakfast prepared, which, in company with Mr. T. W. Partridge, a passenger, and Capt. Spaulding, I partook of in fine cheer, and arrived at my lodgings, Tremont House, at half past 9, enjoying my usual good health and spirits. I feel under many obligations to the citizens generally for their kind attentions, and to the gentlemen who kindly assisted me to fill the balloon. In consequence of the violent wind, I deemed it prudent to leave the rabbit and parachute, which would have been very cumbrous. When over Boston, I found my barometer half way through the car, the ring by which I suspended it having broken off; and while attaching a cord a few inches from the top, I broke the thermometer. This left me nothing but the barometer, which, at starting, stood 20 01—ther. 77 deg.; at 6h. 1m. Bar. 24 2; at 6h. 5m. 23 52; at 6h. 9m. 23 32.

The balloon is much injured, and if it can be repaired, it must require two weeks. I shall ascertain in a few days; and if it can be done, I shall be ready and willing in three weeks to make another ascension for a liberal Boston public.

Yours, &c. C. F. DURANT.

Tremont House,
Boston, Aug. 1, 1834.

[For the New York American.]

DESCRIPTION OF THE GRAND PAWNEE VILLAGE.

(Continued from page 367)

Immediately after our wild welcome by the different Pawnee chiefs, we started onward for the village. It appeared as if every man, woman and child had looked upon the day of our arrival as one of jubilee; the boys had thrown aside their bows and arrows, the females had abandoned their drudgery, and the old had ceased their songs of former victories, to array themselves up for the festival; and now that the reception was over, and all the requisite awe of our determination had been impressed upon us, they threw aside the stern, unbending character of the Indian warrior, and pressed around us as we rode along, with all the kind hospitality of hosts, in receiving their most welcome guests.

In different directions, small bands of the young men would amuse themselves by dashing around the party at the full speed of their horses, and attempting to oust each other from their saddles by the violent collision of their animals. Occasionally a few would start off in a race across the plain, exerting their utmost skill to outstrip their competitors, and endeavoring by whooping and screaming, and by clattering their arms in the ears of their frighted steeds, to excite them even beyond the mad rate at which they were then sweeping over the prairie.

Others of the young men hung around the party, making their remarks concerning its different members, and occasionally exciting loud peals of laughter from their comrades, which, however, were frequently cut short by a stern word from one of the chiefs.

The whole road, from the plain to the village, was lined with women and children, who had not dared to approach during the formalities of our reception, but who now all eagerly pressed forward to gaze upon so unwonted a sight as that of a white stranger entering freely into their village; and all anxious to gratify that curiosity which is peculiarly strong in the bosom of an Indian, more especially if that Indian be a female.

They were nearly all mounted upon the backs of the little stiff maned drudge horses of the village, sometimes singly, but generally in clusters of two and three.

In particular, one wilted, gray headed old squaw, with a family of four children under her charge, attracted our attention. She was mounted upon a little wall-eyed, cream-colored poney, with a roach mane and a bob-tail. There was a lurking devil looking out of his half-closed eye, the very antipodes of his rider, who sat upon his back like the picture of patience. Her charge she had arranged as well as could be expected from a person in her situation. One little fellow, whose two eyes gleamed like sparks of fire from beneath the long tangled hair, which nearly covered his face, was striding almost upon the neck of the horse, armed with a heavy Indian whip; one little one was dozing in her arms, another was clinging tightly to her back, and the face of a fourth, like the head of a caterpillar, just ready to emerge from a cocoon, was peering from the mouth of a leather bag, which was lashed between her shoulders.

But though the old lady thus scrupulously divided the burden with her steed, he seemed far from satisfied with his situation, and at last determined in good earnest to rid himself of his incumbrance.

Tossing his head in the air, he commenced waltzing and capering around upon his hind feet, to the great discomfiture of the old squaw, who, reaching out both hands, clung with might and main to the high pommel of the Indian pack saddle, while two of the children, left to their own guidance, like so many monkeys, clung around the body of their protectress.

The horse, finding that the first experiment had not succeeded to his satisfaction, altered his plan of action, and planting his fore feet firmly upon the sod, in the next instant he flourished his heels as high in the air as his head was the moment before; but still his rider continued to cling desperately to the saddle, making use of every expression of Indian objurgation and soothing, in a vain appeal to the sensibilities of the restive animal, who still continued his capers, to the great delight of the naked little elf who was perched upon his neck, evidently aiding and abetting the mutiny by a sudden switch of his whip, and occasionally casting back his sly laughing black eye upon the old lady and her brood, who were screaming and chattering behind.

At last the animal finding that no physical force of his could free his back from the burden, and coming to the conclusion that the less time he spent in accomplishing his journey the shorter would be his ordeal, he started off at a full gallop for the village, and we caught our last glimpse of him as he dashed between the lodges of the town, urged on by the lash of his imp-like little rider.

When the party had once commenced its march, it was not long before they reached the point of destination; for though the Indians crowded forward to satisfy their curiosity by gazing upon the arms and accoutrements of the whites, they yet remained at such a distance as to offer no obstacle to their progress.

This rule of etiquette was, however, occasionally transgressed, by the troops of untrimmed, goblin-looking little urchins who hung upon the heels of the party, crowding in droves around the baggage-wagons, and gazing with a mixture of terror and wild delight upon the wearied movements of the oxen, who, with lolling tongues and reeling steps, were almost inch by inch winning their way to the village.

Several times when a circle of little curious faces, anxious to see, but ready to run, had formed around the team, a sharp, shrill scream from some more mischevious of the gang, would in an instant disperse all their rallied courage, and send them scampering at full speed over the prairie.

Another grand object of attraction was a negro belonging to the party, who trudged on in front, surrounded by a rabble crowd of women and children. From the first moment of our arrival he had been an object of intense curiosity, and had been gazed at with a mixture of fear and astonishment by the whole nation.

But there is an old saying, that "familiarity breeds contempt," and in this case it was verified, for, by degrees, the circle which formed around him at a respectful distance, became more and more compressed. It was in vain that he attempted to rid himself of their company; they swarmed around him like ants—if he quickened his pace, they did the same; if he lingered along, they were equally slow; and if he turned upon them, they scattered in every direction; but after a while even this wore off, and they finally hemmed him in so that it was almost impossible to move for the crowd. When they had thus closed upon him, the lurking spirit of deviltry began to show itself; they tugged at his coat tail, they pulled his pantaloons, and they jostled him until the perspiration, the effect of fear and his exertions, poured in streams down his face. At length one toothless gray headed old crone, attracted by the glistening appearance of a black leather cap, which was mounted upon his head, made a violent snatch, and seized hold of it; a hot scramble then ensued for the possession, which, after much derangement to the wardrobe of the negro, and much detriment to the hides of the Indians, was obtained by the rightful owner, who had no sooner regained his property, than he opened his shirt, and placing it next his bosom; he buttoned his coat over it up to the chin, evincing his respect to the nation by performing the rest of the journy *uncovered*. He was afterwards known among the Indians by the title of (Wah-sah-be,) the Black Bear.

The Pawnee village is situate in the open prairie, at the foot of a long range of hills, and within about fifty yards of the Platte river, which at this place is is about two miles broad, and is very shallow, being constantly forded by the squaws, who visit the different islands, and obtain from them the only fuel and building material to be found in this part of the country.

The lodges in the town are numerous and built close together, without the least regard to regularity; they are hemispherical in their shape, and are covered with earth to the thickness of several feet; they vary from twenty to thirty feet in height, and some of them are nearly ninety feet in diameter; the large circular or domelike roofs of the buildings are supported from the interior by pillars formed from the upright trunks of trees, and large berths, or cribs, for sleeping, are ranged around the interior, against the wall of the building.

In the centre, a hole is dug to contain the fire, the smoke of which is permitted to eddy through the building and escape at its leisure through a small hole in the roof, which forms the chimney, and at the same time serves to let in the only light which reaches the interior of the lodge.

On account of the scarcity of wood, several families congregate together in the same lodge, and are seen throughout the whole day, lounging and sleeping before the fire, or gorging themselves from the large kettle filled with buffalo flesh, which is perpetually over the fire.

Upon entering the village, we found the tops of the lodges completely covered with women and children, whilst the area in front of the Chief's dwelling was equally crowded. When we reached the front, the Chief, who had ridden in advance of the party, stepped from the dark passage which formed the entrance to his abode, to meet us. He was completely enveloped in a robe of white wolf skin, upon which was painted an hieroglyphic account of all the achievements he had ever performed in his different war parties. Upon the approach of Mr. E——, he advanced towards him, and taking the robe from his own shoulders, presented it to him, requesting him (through the Interpreter) to keep it for his sake. He then ushered the party into his dwelling, and pointing out the place allotted for the reception of the contents of the wagons, he called together a number of Indians, and gave them directions to assist in unloading, while in person he stood at the door, watching the movements of his men, to prevent any attempts at purloining—a crime too common among the lower classes of an Indian village.

Nearly half an hour had elapsed in this way, during which time the lodge was becoming more and more crowded. One dark form after another glided with a noiseless step over the threshold, moving across the lodge until they reached the darkest corners. Here they seated themselves upon the ground, and shrouding their shaggy robes around them, so as completely to screen the lower part of their faces, they fixed their unwavering gaze upon the strangers, while from the dark parts of the building their eyes seemed to shine out like glowing balls of phosphorus.

Not a word was spoken—no undertoned conversation was carried on—but all was silence, save the hurried footsteps of those who were busied according to the directions of the Chief. No jests were uttered, for we were now under the roof of their leader, and any word spoken in derogation of his guests would have called down a speedy return of vengeance.

Upon our first entrance into the lodge a large kettle, which would contain about five gallons, had been filled with buffalo flesh and hard corn, and placed over the fire; and now that we had become fairly settled in our abode, and the bustle of unloading had in a measure passed away, the wife of the chief (by-the-by he has five of them) poured the whole of its contents into a large wooden bowl, and arming each of us with a black dipper made of buffalo horn, made signs for us to fall to.

We did not wait for a second invitation, but immediately commenced an attack with both fingers and dippers into the mountain of food which was placed before us. We had not eaten since daylight it was now late in the day; and the appetites of the party, never particularly delicate, having increased in proportion to the length of their fast, the devastation was enormous. But every excess brings with it its own punishment; and our case was not an exception to the general rule; for scarce had we finished our meal, when a little Indian boy, half covered with a tattered buffalo skin, forced his way into the lodge, elbowing in among the warriors with all that transient air of consequence worn by *little* characters when charged with some mission of importance: he came to the side of the chief who was sitting near us, with his legs doubled under him, after the Turkish fashion, and whispered in his ear.

The chief then rose, and announced that the Long Hair, the second warrior of the village, had prepared a feast in honor of our arrival, and was waiting for the party to come and partake. There was some demurring as to the acceptance of this second invitation; but the Interpreters informed Mr. E. was there no resource, as eating your way into the good will of the savages is one of the necessary accompaniments to the successful negotiation of an Indian treaty, and to plead that we had already eaten sufficient was useless, for that is a thing incredible to an Indian, who always carries with him an appetite proportioned to the quantity to be eaten and the opportunities of doing so; and let the latter come as often as it may, it invariably finds him prepared.

After some consultation, and seeing no remedy, we left the lodge, and followed our little guide through the intricacies of the village, to the dwelling of the Long Hair. When we entered he was sitting upon the ground, and motioned us to a seat upon some dirty cushions of undressed hide, which had been placed for us by one of his wives.

He was a stern, gloomy looking man, with an anxious wrinkled brow, a mouth like iron, and an eye like fire: he evidently made efforts to be sociable; but it was not in his nature; and during the whole feast, the stern unbending character of the Indian warrior was continually peering out from beneath the show of hospitality. He urged us to eat,

and he even attempted to smile; but it more resembled the angry snarl of a wild cat, than the outpourings of any pleasurable emotion. In short, we liked him not, and hurried through our feast as soon as possible. When we had finished, and while a number of the party were smoking, in turn, from a large red stone pipe, which the Chief passed around, Dr. M——, the physician attached to the party, rose up and slowly sauntered around the lodge, until he observed a small bundle of bones and skin, which hung from a pole crossing the centre of the lodge. Curious to know what it might contain, he reached out his arm to take hold of it,—from the moment that he had left his seat, the brow of the chief had darkened, but he said nothing; contenting himself by narrowly watching the motions of his guest,—but no sooner had he touched the bundle, than the effect upon the frame of the Indian was like an electric shock: he half started from his seat; the veins on his forehead swelled like whipcord; and his eyes shot fire—while, with clenched fists and extended arms, he shrieked out something between a yell and an imprecation, upon the head of the astonished transgressor.

The secret was soon explained by the frightened interpreter. The bundle that had attracted the curiosity of the Doctor, was the *medicine bag of the lodge; and by changing its position, he had been guilty of one of the greatest outrages which could have been inflicted upon the superstitious feelings of an Indian—and at another time, might have paid dearly the forfeit of his rashness. As it was, at the earnest solicitations of the interpreter, he resumed his seat, and the anger of the chief passed away.—Shortly after this, another courier arrived to invite us to a third feast; and taking our leave, we followed him to the lodge of this other chief. This feast was exactly the same as the former; and ere we had finished, invitation after invitation came pouring in upon us, until after visiting about ten or fifteen lodges, one after another, the different members of the party gave out, and returned to the abode of the chief.

Upon our return, Mr. E—— assembled the different warriors, and after some consultation, the following day was appointed for holding a Council, to agree upon the terms of the treaty.

When this had been settled, the Chief turned and spoke a few words to the heralds,† who immediately started through the village, proclaiming to the nation the time appointed for the approaching Council.

While Mr. E. was thus engaged, the rest of the party had drawn together around the fire, and were discussing the different events of the day, when their attention was attracted by the motion of the bear-skin, forming the inner door of the lodge, which was slowly raised, and a female stepped timidly from the passage into the interior, and moved rapidly, and evidently with a desire to escape observation, into the darkest part of the lodge. Her whole appearance bespoke her a stranger. She was beautiful; and though a fearful being, she moved with the step of a queen among the wild horde around her. She was the wife of the Keoway Indian, and her dress was of a richness agreeing with his own. A bright band of silver was fastened around her neck, a small jacket of scarlet cloth, the spoil of some pillaged caravan, edged with silver lace and beads, was secured around her waist and breast, with scarlet ribands, and a long garment of blue cloth enveloped the rest of her form. Like her husband, she wore medals of silver upon her breast, and bracelets of the same upon her wrists; her mocassins, also, were more finely ornamented than those of the Pawnee women, who were seated around, and who were engaged in offering to her all those nameless civilities due to a stranger and guest.

From the moment of her entrance into the lodge, she had been the object of attraction to all eyes, and finding that it still continued, she withdrew into one of the berths, and dropping in front of her a screen of grass matting, she remained there for the rest of the day. I.

* Every lodge in an Indian village contains what is termed its Medicine Bag, which is hung up in the most conspicuous place, and regarded with the greatest veneration, not only by that individual family, but by the whole tribe. Little is known of their contents, as they are seldom opened, and always with the greatest formalities, while the greatest care is observed in excluding strangers, whose presence or interference is regarded as a certain source of future misfortunes.

† These heralds are self-elected, and are composed of the eldest men of the village, who having spent their younger days in war, now solace their old age by boasting of what they have done, and by occasionally running through the town to spread the orders of the Chief. When no such service is required, they amuse themselves by stalking around the village, yelling out advice to the young men, with voices that might be heard at the distance of a mile, but which, as far as I was able to judge, was attended to about as much as if it had never been uttered. I

FOREIGN ITEMS.

The late Miss Frances Wright, who rendered herself so notorious in the United States by the extravagance of her opinions, has taken to herself a husband, and is lecturing in London under the name of Madame Darusmont.

A German translation of the pamphlet entitled the *Reform Ministry and the Reformed Parliament* has been published at Carlsruhe; it is from the pen of Mr. Maurice Bernays, and has been circulated all over Germany.

A panoramic view of the city of New York is at present exhibiting in London. The point of view from which the picture is taken is the Park, and it includes the Broadway, the Bay, with its islands, and all the most striking objects in the neighbourhood of the city. The execution of the picture is unusually good.

Poor Debtors.—At the last meeting of the Society for the Discharge and Relief of persons Imprisoned for Small Debts, fifty-five poor debtors were set at liberty at the society's cost. During the last year this society has liberated 152 debtors, at an expense of £348 7s. 5d. As the whole costs of the society are included in the sum, the debts for which these unfortunate persons were deprived of liberty cannot have amounted to much more than forty shillings! By the Attorney General's new bill abolishing imprisonment for debt, except in case of fraud, the operation of the benevolent society will in future be rendered unnecessary.—[London paper.]

Madame de Stael and Sir James Mackintosh.—The genius and papularity of English living poets, the high estimation of the art, the marvelous events and extraordinary excitement of the time, the influx of distinguished foreigners from the different countries of Europe, rendered certain circles in London brilliant beyond example. Lord Byron was now at the height of his eccentric career; and Madame de Stael, after having paraded herself and her grievances, during ten years, from city to city on the continent, came to London for the purpose of gathering homage through every gradation, from Grub-st. to Holland House. Sir James Mackintosh squandered his mornings, and evenings, and his faculties on those dazzling circles. He did the honors of the genius of Madame de Stael; he escorted, introduced, and exhibited her; he was himself among those whose acquaintance was sought by strangers, as one of the leading intellects of his nation: his presence was thought necessary wherever distinguished talents and the best company were combined for social enjoyment or for ostentation. But what were those frivolous successes of society, those perishable vanities of an hour, compared with the sacrifice of so large a portion of the small compass of human life, which might have been devoted in the solitude of his cabinet to the production of lasting monuments to his reputation? The only remains of his labors at this period are a few occasional papers in the Edinburgh Review. Of his contributions to this publication some obtained a certain celebrity, and were known to be his; others are less known to the general reader, and were not read as his beyond the literary circle of London.—[Life Sir J. Mackintosh.]

Sagacity of a Newfoundland Dog.—The Asia was one of the fastest ships in the fleet, and we stretched away to the westward for several miles, till a gun from the Commodore gave us notice to close. We had seen nothing of the boat, but we saw a strange schooner, Yankee-rigged, that was standing towards the rocks, and we hoped that if the long-boat was yet in existence, there would be a chance of her being picked up by the schooner, though the general idea was, that she had gone down, and every soul had perished. We had scarcely wore ship for the purpose of joining the convoy, when a dense haze obscured them from sight, and as evening was closing in fast, every officer was stationed in different parts to keep a look-out. We had retraced about half our distance, and the passengers were conversing in melancholy mood upon the events of the past night, and the probable fate of the long-boat, when a noble Newfoundland dog, that had lain sleeping on deck, suddenly raised his head, and gave a short growl. The Captain was pacing to and fro with the chief mate, but stopped near the animal, and addressing it, said, "Halloo, Nep! what's the matter with you, old boy?" The creature wagged his long bushy tail at hearing his master's voice, and then composed to slumber again; but in less than a minute he resumed his growling, and raised himself upon his fore-paws. "He hears something beyond our knowledge," exclaimed the Captain: "up, Nep, up my boy, and see to 'em!" The animal at first rose lazily, stretching his limbs and shaking his coat, but in an instant he stood immoveable in the fixed attitude of attention, and then sprung away upon the poop-ladder, running from side to side, and barking most vehemently, till at last he took his station to windward, and seemed perfectly furious. "We cannot be within six miles to the fleet," said the captain, "and yet I am confident there is something near us. Weather cat-head there, do you see or hear anything to windward? Silence, Neptune—down, boy! down!" and the animal became perfectly tranquil, wagging his fine tail, and rubbing his head affectionately against his master's hand. The officer on the look-out replied in the negative, as did also several others who had cautiously looked round, and attentively listened. "I'll stake my existence on the dog's sagacity," said the captain, addressing the chief mate. "By heavens! it may be the missing boat!——haul up the main sail and square the after-yards: keep her course quarter master, till I tell you to luff to the wind, and let there be silence fore-and-aft." The orders were immediately and punctually obeyed, and then the captain, patting the head of the huge animal, exclaimed, "Now, Nep, we must trust to you, old boy; look for 'em, Nep! seek 'em out!" The dog whined with a languid playfulness, as if satisfied that he had awakened attention, when there arose a low, hollow moan, that seemed like a heavy groan, issuing from the very bowels of the ocean. The ship, though moving through the water, was greatly retarded by the shivering of the after-sails, and the dashing noise occasioned by her velocity had ceased. "Folkstle, there," cried the captain, "do you see anything on the weather-beam?" "No, sir," replied the officer, "but there was a sound came down upon the wind just now—though I fear—" he stopped short, but added in a whisper—"it was no living creature uttered such a groan as that!" "The boat—the boat, Nep!" said the captain, patting the dog, "look out for the boat, sir." The animal raised his fore-paws, laid them on the rail, and crouching his head upon them, looked intently to windward, moving his ears rapidly. In a few seconds he gave a shrill howl, and then barking, jumped down, and then fawned upon his master. "Lanterns in the fore and main rigging!" shouted the captain; "clear away a gun there, forward; and Mr. ——, burn blue lights," when, caressing the dog, he added, "There my good Neptune, see to 'em, lad—look to 'em."—Neptune appeared to comprehend what was said to him, for jumping on a coop, he snuffed the wind and fixed his eyes steadfastly about a point abaft the weather-beam. The lanterns were displayed, and blue lights sent forth their clear blaze, when again that hollow moan was heard, and the dog, with loud barking, leaped from his station, and fawned upon the captain, who exclaimed," Brace the yards sharp up—aboard main tack; and, quarter-master, keep her clean full and by;—at all events, we'll see the end of this!" The sails were nicely trimmed, and the gallant ship upon a bowline bent to the breeze, and dashed the spray from her bows. Blue lights were still burnt occasionally, the lanterns were shown abaft, and in half an hour the ship was hove in stays, and soon was reaching away on the starboard tack. In another half-hour (for the captain timed it with his watch) the mainsail was hauled up, and the after-yards were in the act of being squared, when the officer at the weather cat-head exclaimed, "A boat to windward—board on the weather-bow!" Every eye was instantly directed towards the spot, and there was visible amidst the gloom a small dark speck; but at the same moment was heard the sound of many voices simultaneously shouting, and warm congratulations were exchanged among all classes on the the deck, as there now could be no doubt that it was the missing party. The main and mizen topsails were thrown to the mast; the small cutter was lowered from the quarter and sent away to tow the long-boat alongside, and in another half-hour seventy-six individuals, who, in all probability, would have otherwise perished, were safe upon our decks. —[Leaves from my Log Book.]

NEW YORK AND OHIO CANALS.—In consequence of a combination among the owners of the great forwarding lines on the New York and Ohio Canals, by which the rates of transportation from Albany to Buffalo were advanced from 67 cents per 100 lbs., to 82 cents per 100 lbs., and the good effects of the reduction of tolls on the canals thereby counteracted; the Canal Commissioners of Ohio, at a meeting on the 21st of July, ordered that hereafter *double* rates of toll shall be charged on all goods upon which the charge for transportation exceeds the following rates per 100 lbs., viz:

From New York city to any place on the Ohio Canal		*On heavy goods.*	*On light goods.*
Betw'n Cleveland & Akron (inc. the latter,)		$1 27	$1 41
Akron and Masillon,	do.....	1 34.....	1 48
Masillon and Trenton,	do.....	1 52.....	1 66
Trenton and Dresden,	do.....	1 61.....	1 75
Dresden and Newark,	do.....	1 65.....	1 79
Newark and Carroll,	do.....	1 73.....	1 87
Car. & Colum. or Circleville	do.....	1 80.....	1 94
Circleville and Chillicothe,	do.....	1 83.....	1 97
Chillicothe & Portsmouth,	do.....	1 86.....	2 00

I certify the above to be a true copy,
Attest—I. A. LAPHAM
Sec'y Board Canal Com.

Canal Commissioners' Office,
Columbus, July 23, 1834.

The Duke of Northumberland has presented the proprietor of the Surrey Zoological Gardens with the Leucoryo antelope, brought by Lord Prudhoe from Dongola. This rare and beautiful animal is about the size of a small horse, of a pure white color, and its horns are three feet in length. It is the most celebrated of all the antelope genus, and is supposed to have given the ancients the idea of the unicorn, such as it is painted on the Royal Arms of England. These animals are represented on many of the Egyptian monuments, but are only found in Dongola and other provinces of Central Africa.

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly; either* or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany*.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal-plue wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, 200 do. 1¼ do. ¼ do., 40 do. 1¼ do. ⅜ do., 800 do. 2 do. ¼ do., 600 do. 2¼ do. ⅜ do. soon expected. *Flat Bars* in lengths of 14 to 16 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2¼, 2⅜, 2½, 3, 3⅛, 3¼, and 3½ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norrist. Railroad
m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabethstreet, near Bleecker street,
New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J25 tf

RAILROAD CAR WHEELS, BOXES AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 58 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

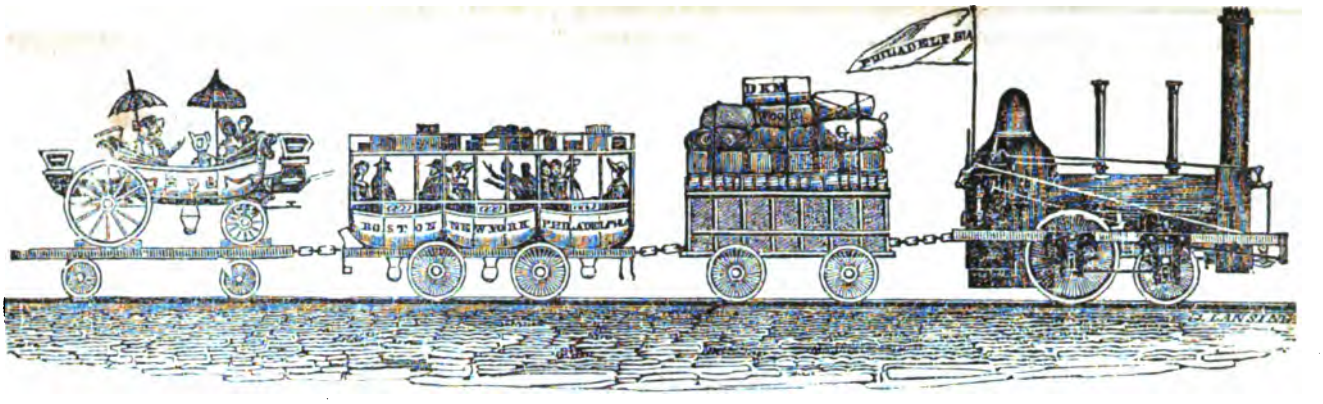
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m8



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, AUGUST 16, 1834. [VOLUME III.—No. 32.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, AUGUST 16, 1834.

PARNELL ON ROADS.—We are indebted to the Messrs. Harpers of this city for a copy—indeed, the *only* copy to be found in New-York—of a treatise on roads, by the Right Hon. Sir H. Parnell. It is said—and we can only speak of it at present from hearsay—to be a very valuable work. If we find it so—and we cannot doubt it—our readers will have an opportunity to judge of it for themselves, as we shall publish it, or most of it, in the Journal, and afterwards in book-form, at a cheap rate. We shall, at any rate, make copious extracts from it.

We publish in this number of the Journal the official decree of the Colombian government, upon the subject of a *rail*, or other, *road* across the isthmus of Panama, together with a well-written article from the Washington Globe upon the same subject. Several attempts have been made within the last 12 years, by different persons, to project a plan by which this grand object could be effected ; but all have failed. The present one will not, we hope, share the fate of the others.

There are men in this city who might, with their own funds, accomplish the undertaking : and in doing it *treble* their wealth, as well as immortalize their names. Who would not be more proud of *such* a victory than of conquering the conqueror of the world, if the latter must be attended with the misery which usually attends military achievements ? Who is there that would not prefer to have his name coupled with such a work, than to be the victor of Waterloo ? The latter consigned thousands to the grave—the former would be the means of furnishing *hundreds* of thousands with the means of happiness and wealth.

We should be exceedingly gratified to learn that the work is to be accomplished by American enterprise and American capital.

RAILROAD TRAVELLING.—It appears, says the Baltimore Gazette, that the amount received by the Baltimore and Ohio Railroad Company from persons travelling between Baltimore and Frederick, during the month of July last, exceeded *Eight Thousand Dollars*. A gentleman who took an excursion on the railroad a few days ago, informs us that there were between three and four hundred persons in the two trains that ran to Ellicott's Mills in the afternoon. They were drawn by new locomotive engines, of American construction, using anthracite coal for fuel, and working with a degree of ease, power and swiftness, fully equal to the best English engines. The passage by each other, in opposite directions, of the trains of carriages, he described as being but the work of an instant, leaving on the minds of the passengers a strong and lively impression of the wonderful facilities afforded by this mode of conveyance.

[*From the Patterson Intelligencer of 13th Aug.*]

Since the Railroad has been brought into the centre of our town, instead of landing the passengers at the depot, in the outskirts, a manifest improvement in its business is exhibited. Four times in each day our village is thronged with strangers in pursuit of business, pleasure and health, giving life to our streets, and profit, we should hope, to the stockholders of the beneficial institution by which this effect is produced. During the month of July, we have ascertained that 6359 passengers travelled this road, viz. 5584 through passengers, and 775 way passengers.

The report of the Committee appointed in February, 1833, to examine into the state and prospects of the road, is before us, by examination of which we find the expectation was, that when the Railroad was completed to the river, 172 passengers per day would travel on it. The experience of the present season appears to insure more than a fulfilment of these expectations, as, though one of the principal inducements for travellers to use this road, viz. its being finished to New York, is wanting, yet during the last month it considerably overran this estimate, and we understand has thus far in the present month, averaged 217 passengers a day.

Franklinville, Baltimore county, Md., August 13, 1834.

To the Editor of the Railroad Journal.

SIR,—In your article on Improved Railroad Wheels in the Journal of the 9th, you speak of me as being the inventor of the plan of the wrought iron rod in the wheels, which is a mistake. It was invented and patented by Mr. Phineas Davis, of the firm of Davis & Gartner, and the only agency I have had in the business, has been to mount Mr. Davis' wheels or axles, for the Baltimore and Ohio Railroad Company, and for other companies, and I am prepared to execute orders for similar work, the wheels to be furnished by Davis & Gartner.

Yours, respectfully, DEAN WALKER.

On the Probable Location of Railroads and Canals. To the Editor of the American Railroad Journal, &c.

SIR,—A writer in the Railroad Journal of the 14th inst., who signs himself "C. O." (Deep Creek,) has given the public a few remarks on the location of railroads and canals, in which he proposes to call their attention to the proper direction of these works, so as the meet the general improvements now progressing in our extensive country, and to adapt them to such advances as future enterprise may produce. He has, however, only touched the outline of the subject, without investigating the principles upon which such works should be conducted : considerations which are indispensable for the accomplishment of the object proposed. In the following views, of the inquires of C. O. are pursued and extended, and, it is hoped, illustrated in such a way as to call the attention of the public to an examination of this interesting subject.

It may be very difficult, in treating a subject of this kind, to avoid the consideration of the question which of the two modes of conveyance, railroads or canals, is to be preferred, and likely to supersede the other in public estimation.

As the subject has been investigated by the ablest engineers, and others qualified to judge, both in Europe and the United States, the whole of which is to be found in the preceding pages of the Journal, it will be avoided, so far as may be done without leaving the matter under discussion imperfectly explained.

The subject of canalling in our country has been the theme of such profound inquiry—the several practicable and even possible routes and plans for such works, so often made the subject of minute estimate and investigation—that it may be said to be in a manner exhausted. It is at this time scarcely possible to find a line of country of any extent, through which such work could be opened without incurring an expenditure not be justified by the profits. The success of the Hudson and Erie Canal in New-York has induced numberless efforts of this kind, and awakened an almost enthusiastic zeal in favor of them. The public were captivated by the brilliant results from this gigantic enterprise, not only in the amount of tolls, but also in the universal improvement in the value of the landed property which followed its completion. But in how few other cases has success attended the opening of canals ? Even in the state of New-York, many of the canals

which have been made since the completion of the first great work have been failures, and are now supported from the profits of the one first completed.

The great canal now under construction from Washington city to the Ohio, (the Chesapeake and Ohio Canal,) if ever completed, is not expected to afford tolls to the amount of 2 per cent. on its cost; and yet this passes through a country abounding in agricultural production, and mines of valuable minerals.

The Delaware and Chesapeake canal is understood to be an unproductive stock; and the canal, through the Dismal Swamp, which has been more than 30 years in progress, now that it is completed, is found to produce a very meagre dividend in tolls. Of the canals cut by the state of Pennsylvania, and the chartered companies within its limits, scarcely one in ten is expected to be profitable stock, and its citizens are now turning their attention to railways, &c., as a substitute for them. In short, there is scarcely a great work of this kind, (the Hudson and Erie Canal excepted,) which has not terminated unfavorably to the adventurers. It is not proposed to enter into an inquiry what, in our country, has been the cause of these failures in canals —works which are so productive in the European states; but merely to assume the fact, as one which will not be controverted by persons experienced in these works, that, in our country, canals are enterprises attended with danger of loss to the parties adventuring, and that there are few situations when they could be attempted, (on a large scale at least,) without hazard of the loss of capital.

With respect to railroads, the matter may be said to be very different. They may, it is believed, be constructed under many circumstances in which canals are inapplicable, at less cost, and an almost absolute certainty of giving a better return in tolls for the capital employed.

The following are the principles which, it is believed, should direct the selection of a route for a railroad, and which, if practised on, will insure success, without regard to future changes or contingencies.

In the 1st place, railroads should be laid out to run from the fertile districts of the interior of the states, to some (the nearest) seaport or navigable waters, whence the articles conveyed on them may be transported to a foreign or distant market.

2dly. The great intercourse now subsisting between the seaport towns on the Atlantic require the benefits of this mode of conveyance. The time cannot be far off when this intercourse will be increased to an indefinite extent. In the interim, railroads may be built with a certainty of profit between any of these cities, until a continuous line is finished from Boston, (perhaps Portsmouth, N. H.,) to St. Mary's, in Georgia; and it is probable the line might be safely extended from St. Mary's to St. Marks, on the Gulf to Mexico. The intervening country between the two places having been ascertained by Gen. Barnard to be eminently favorable to such a work. (The Peninsula being only 150 miles across, and the highest land on the ridge about 50 feet above the level of the ocean.)

Another class of railroads which promise certain profit on the capital invested, are the lateral roads which will be run from the mines of coal, iron, lime, plaster, &c, which abound in the mountainous region of some of the states, to some road or canal extending from the fertile interior districts of the country to a seaport. The number of lateral roads which will be required for the transport of these products of the mines, must be matter of conjecture. Every day adds to the discovery of beds of valuable mineral substances, and to the number of mines opened: from all which lateral roads must be constructed to intersect the nearest railroad or canal to navigable water. Many of these are already in profitable operation, and are connected with some main line of railroad or canal, by which the produce of the mines is conveniently carried to market.

From what has been said it would seem that canals offer few inducements for the enterprising to engage in their construction: that few situations in our country are adapted for this purpose, unless at an expense which the profits will not justify; that, if constructed at all, the selection of the routes must be left to the judgment of the engineer, looking to the probable advances of the country in other general improvements; that no definite rules can be laid down for their construction, their success depending upon so many contingencies, not likely to be united in their favor, &c. But that railroads may be undertaken with confidence of success, wherever they are made to run from a seaport or navigable water to a district of the interior country, which affords a large quantity of valuable agricultural or manufacturing products; that they will succeed, if run from one seaport to another, everywhere on the Atlantic coast, from Portsmouth, N. H., to St. Mary's, Ga., and probably across the Peninsula to a port on the Gulf of Mexico, (as St. Marks;) and, lastly, that they will probably yield a certain and profitable return, when run laterally from beds of mineral products, to intersect other main railroads or canals leading to a place of export.

The introduction of locomotive engines, to propel carriages on railroads, has greatly added to the utility of this mode of conveyance; and the improvements which modern enterprise has made in their structure, increasing, to an almost unlimited extent, the power of the engine, and at the same time giving greater strength, and affording a surer protection from casualties, will serve to exalt them in the public estimation and ensure their universal employment.

CIVIS.

Proposed Road for Locomotive Engines. To the Editor of the Railroad Journal, and Advocate of Internal Improvements.

SIR,—It must be apparent to those who notice the progress of improvements, and especially to the readers of your valuable journal, that a new era in this branch of the economy has commenced.

The enthusiasm which seems to pervade our country, to say nothing of the old world, for establishing railroads and canals, will put a new face upon human economy. Inland commerce, and even military movements, will scarcely feel the obstacles of time and space, which once so fearfully embarrassed their operations.

Whoever will consider the unsatisfying nature of a ll partial improvements, and the excessive anxiety to extend them, not merely through all the great thoroughfares for travelling and transportation, but to every hamlet in the country, will realize the truth of what may otherwise seem extravagant.

There is no good however without an alloy. The enthusiasm and spirit of competition which so excites the public mind will no doubt often cause an unprofitable expenditure and misapplication of large sums of money, which the owner can illy afford to lose. Railroads will be made at unnecessary cost, and in places where the business would not pay for them at the lowest cost. It has occurred to the writer of this article that this evil may be at least somewhat remedied, and without checking in the least the public ardor for improvement. A just regard for economy requires that every device for transportation should be apportioned, in its expense, to the business to be done. A road from Baltimore to the Ohio must not be allowed to cost as much per mile as one from Liverpool to Manchester; or if it must cost as much, the work can only be done by posterity.

This course of reflection is presented to the reader because it led the writer to the conclusion that a road, which can be constructed much cheaper, and repaired at less expense than a railroad, and yet approaching its convenience and usefulness, is a great desideratum in the present system of improvements. To accomplish this end, it is proposed to make a road in the following manner, viz.: The route having been selected and line determined, with great care, let the grading be done in the usual manner, varying in width from 12 to 24 feet, making the narrowest parts where the work is most expensive, and vice versa; when the embankment is formed, roll it down well with a massive cast iron roll, then put on a coat of gravel or shell stone about 4 inches thick, and roll again. When the road is finished, let it be used as follows: No other power than a locomotive engine to be permitted; these are cheaper than horses, especially when, as in this case, they require but little weight to prevent the slipping of the wheels. All the cars or waggons to be used must have wheels whose width is apportioned to their load, say none less than 8 inches wide; and to prevent injury to the road, one axletree of the waggon should be shorter than the other, so that two 8-inch wheels might roll 12 inches, or cars for light loads may be made with three narrow wheels, two before and one behind, or reversed, as might be found most convenient.

Different waggons should not all be of the same width; the more diversity in this respect the better. It can scarcely be doubted that, with such power and vehicles, the road would easily be kept smooth, and become very hard. Constant but not expensive attention would be required to fill up any depression with proper materials. Drains must be kept open and care taken to let the water run off at the sides. In the winter, a broom attached to a car, with gearing similar to that which is used to water city streets, could be made to sweep off all the snow. This apparatus, as well as the waggon which supplied the gravel, &c., for repairing, could be attached to one of the trains at pleasure, with very little expense for power. It is unnecessary to state in detail all the arrangements that may be made for preserving the road and promoting economy. The heaving of the frost in winter will de deemed perhaps the most formidable obstacle to this form of road; but it is not found that paved streets, or the M'Adam's road, or even the common stone turnpike, is injuriously affected by this cause. They are injured by the pressure of heavy loads on narrow wheels, while the earth is soft. If the pressure were upon a greater surface, the injury would be diminished. The nearer we can arrive at an equal action or stress, upon all the parts of any mass of matter, the less effect will be produced on each of those parts; and the more solid the material, and uniform the condition, of any such mass, the greater will be its power of resistance. To attain the first, the wide wheel is relied on; and the last is approached by grading the road as much as practicable some two or three feet above the common surface, and where excavations are necessary, keeping out the water by drains. In wet springy grounds, grubble stone may be found essential. The dryer the road is kept, the less will be the effect of frost; and the more uniform the moisure in it, the less will any part be displaced by freezing or thawing, by reason of the expansion and contraction of all the parts together.

Good gravel turnpikes, where heavy loads are not put on them, keep their form remarkably well, with but little care in repairing, although exposed to the action of horses' feet, and of narrow wheels always running in the same rut. The road from Baltimore to Washington is an example of this kind. The public gravel walks in the cities are not injured by frost or rain, and one of the means for averting such injury is rolling them with heavy rollers, not unlike, but less effective, than the rolling of the wheels of the waggons, as proposed. These considerations have satisfied the writer that no serious inconvenience is to be apprehended from frost, and that the road may be used with but little interruption from that cause throughout the year in any part of the

United States. Heavy drifting snows would perhaps be thought difficult to conquer; but it is known that there occurred, during the winter of 1830–31, an unusally severe drifting snow, and yet the cars on the Baltimore and Ohio railroad were not stopped, even in their deep cuts, more than a single day; the snow being swept off as fast as it fell on the road, by a machine attached to the cars. It remains to notice some of the peculiar advantages of the proposed road. Here it should be observed that it is not intended to recommend it as preferable to a railroad, where the assurance of business will justify the expense of the latter; but as a valuable substitute where that is not the case, and as being free from some important objections to which railroads are liable.

The proposed road must, as well as railroads, necessarily be under the exclusive direction of a company, or of a special municipal authority, which has power to prescribe and enforce regulations; but these regulations will admit of a much more diversified operation of business than can be conducted on a railroad: the vehicles for transportation may meet or pass at pleasure, and may be drawn at any speed suited to the business of the owners. Companies or individuals running stages, carrying the mail transporting merchandize, or heavy products, having their respective establishments of engines and trains, may each start at their own time, and run at the most convenient speed. Where there are no ruts, the slow train may easily turn out for the faster one to pass. This operation approaches very nearly to all the advantages of a road for general business, gives full scope to competition, and of course protects the community from some of the dangers of monopoly. Another essential advantage of this road is, that an engine of light construction may exert a much greater power in ascents that can be done where the wheels run upon an iron rail.

As this is an important consideration, I may be excused for presenting it more distinctly.

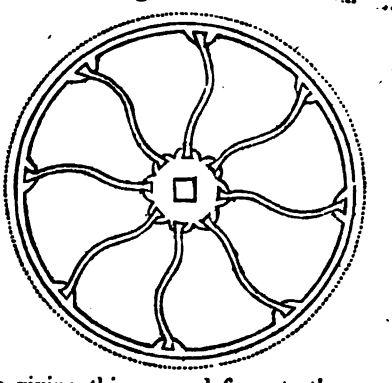
A locomotive engine, weighing 6 tons, where all the wheels are worked, is ascertained by experiment to contain an adhesive power of 672 lbs. on a level, which is one-twentieth of its weight. This engine will draw a load of 17,658 lbs. in addition to its own weight, without detrimental slipping of the wheels, up a plane of 1 foot in 50. The proportion which the adhesive power of wheels on a gravel road bears to the weight of the car is not yet accurately ascertained; but when it is considered that the diameter of the wheels may be greater than would be safe for those of railroad cars, it will not be unreasonable to estimate the adhesion at one-eighth the weight of the car, two-thirds of the load resting on the working wheels. Even on the iron rail, the adhesion has been found under very favorable circumstances more than one-tenth of the weight upon the wheels. According to the proposed estimate of one-eighth, an engine weighing 3 tons contains adhesive power of 830 lbs. On a level, and after making the proper deductions as before, for the gravity of the engine and its diminished pressure on the ascending plane, its adhesive power will, on a plane of one in fifty, be sufficient for drawing a load of 28,450 lbs. in addition to its own weight. If the ascent of the plane be 1 in 25, the effective adhesive power of the six-ton railroad engine will only be sufficient for a load of 2,820 lbs., while that of the three-ton gravel road engine will suffice for a load of 14,700 lbs. The calculations for these results are made from the usual allowance of 10 lbs. to the ton for the friction of the loaded cars; that for the engine car, being a constant quantity, is not taken into account. An allowance is made also for the diminution of pressure, and consequently of adhesion on the planes, which, although neglected by the writers on railroads which I have met with, is an important item. From these facts it will be seen, that upon the hard gravel road an engine will have adhesion enough to employ a much greater portion of its steam power on ascents than can be effected on a railroad; and consequently, the engine being less embarrassed by its own weight, may be proportionably lighter. It is also apparent that when the whole steam power of an engine can be exerted, without slipping the wheels, it can ascend much steeper acclivities. To what extent this may be accomplished, remains to be ascertained; but if ascents of 1 in 20 can be overcome, there will be no difficulty in crossing over a mountainous country without the aid of any other machinery than the locomotive engine. There are few mountains which may not be graded to four and one-third degrees. There is another consideration which strongly recommends the proposed road: wherever the grades are not too steep, the road will be a perfect preparation for laying a double track of rails, which may be done as soon as business will justify. The steep acclivities must necessarily be overcome by other means, and the location adapted to such change of plan. In conclusion, it may be remarked that the most effective plan of transportation, whether it be railroad or canal, should be adopted, when the business will justify the expense, and all other plans must be regulated by the same considerations, viz.: business and expense.

The pioneers of the wilderness are obliged to begin with a pack-horse path, while the people of the Atlantic border, with their hundreds of passengers and tons of merchandize passing daily, may afford to make railroads at almost any expense. All intermediate conditions of business must necessarily adapt their roads to their circumstances. Each path or road, however little frequented, is tributary to others in more general use, which, like the streams passing from the summit regions to the ocean, gather business as they progress, and justify a proportionate expense in their improvement. And prudent men, however ardent their impatience to have the best roads, will be governed by the circumstances in which they are placed. It is in this view that a road which is preferable to the common turnpike, and cheaper than a railroad, is a desideratum in our transportation economy.

The varied ingenuity of those whose attention is now engaged in improvements, will no doubt discover some objections, and probable advantages, too, which have not occurred to the undersigned. The subject is however submitted to that candid consideration of an intelligent public, which cannot easily be led astray by unsubstantial projects. It may be observed, that the locomotive engines have been for some time in operation in England on common roads, where the projectors seem to be sanguine of entire success; but if it can be used on roads where horses' feet and narrow wheels are permitted to break the even surface, and over the hills of common turnpikes, how much better will they work on a road prepared and used as above proposed. Yours, &c., J.

Experiments on Wheels with Straight and with Curved Arms. [From the London Mechanics' Magazine.]

Sir,—Having read some remarks, by two or three of your correspondents, in regard to springs as applied to locomotive engines and other heavy carriages, and noticed the suggestion thrown out, that the spokes or arms of the wheels might possibly be made of such materials, and of such a form, as of themselves to counteract sufficiently the jolting of the superincumbent and progressing weight, and so dispense with the costly springs at present used, I am induced, by the perusal of these speculations, to send you an account of some experimental observations of my own, which have, I think, a strong bearing upon the subject. About five years ago, I fitted up some waggons, for a coal concern, which I have the management of here, to run upon a railway of cast iron. The wheels are of cast iron, but have *wrought* iron arms, in the form and manner following:



In giving this curved form to the arms, I did not at the time contemplate that they should act as springs; though, as will be presently seen, it has been attended with great advantage. The ordinary weight of these waggons, when full of coal, is about 3 tons 15 cwt., waggon included. On this same railroad, an iron company have the privilege of conveying their iron ore, the waggons employed for which purpose are entirely of cast iron, with straight arms, and, when loaded, weigh (waggon included) something less than 3 tons. In the course of last summer, I found it necessary to repair a wooden bridge of considerable extent, over which both kinds of waggons had to pass, during the time these repairs were going on. To the great surprise of the workmen, they found that our own waggons, although the heavier, as above stated, produced less effect on the bridge than the others. This I could only attribute to the difference in the form of the arms of the wheels; and every observation which I have since made serves to confirm me in this conclusion. I have rode alternately on both sorts of waggons, when at their greatest speed, and certainly a sensible difference is felt to the advantage of the crooked and slender arms. The noise also which they make is much less. It may be proper to add, that the wheels with the wrought iron arms stand their work uncommonly well—much more so than the others. The fact is, we have not had one broken or worn out during the five years that they have been in constant use.

Should this article have the effect of turning the attention of some of your ingenious readers to the subject, it might be of service. Our wrought iron arms are 5 inches wide, and scarcely ⅝ of an inch thick. Supposing, then, that, instead of being of wrought iron, they were made of steel of suitable quality, they might be made thinner than ⅜, and with a greater number of arms: a much better form of curve, too, than that I have employed may very possibly be suggested.

I am, sir, yours, respectfully,

Wm. Brough, Mineral Surveyor.

Cwmneath, Glamorganshire, Dec. 15, 1833.

Lake Ontario Steamboats.—It is not generally known to tourists, that there is a fine route from Saratoga to Ogdensburgh, on the American shore, via Lake George and Champlain, which since the appearance of Cholera in Canada, is a good deal travelled. We learn that there has not yet been any case of Cholera on the American side. In consequence of the prevalence of that disease at Prescott and Kingston, the steamboat United States has, for the present, stopped touching at her usual landing places on the Canadian side of the River and Lake. Capt. Van Dewater makes a trip to and from Ogdensburgh and Niagara every fifth day, running the whole 300 miles in from 33 to 35 hours.—[Albany Eve. Jour.]

[*From the Globe.*]

RAILROAD ACROSS THE ISTHMUS OF PANAMA.—The Globe of this day contains two Decrees of the Government of New Granada, which may be considered as an advertisement for proposals to construct a Railroad across the Isthmus of Panama; and as the subject is one of the greatest importance to the world in general, and especially to the United States, we shall offer a few observations upon it.

Ever since the discovery of the Pacific Ocean, some safer and easier channel of communication between it and the Atlantic, has been the object of universal desire; and the narrowness of the tract of land which separates them at one point, gave great encouragement to the hope that such wish would be speedily fulfilled. Three centuries have, however, passed, and not only has no ship canal between the two seas been made or even attempted, but there is actually nothing which deserves the name of a road, connecting any point on the one with any point on the other. Seldom, if ever, has a wheel carriage rolled from the Atlantic to the Pacific.

The Spanish Government did indeed order surveys, which were in one or two instances begun; and a host of decrees are still to be found in the old *Recopilaciones*, setting forth the importance of establishing a communication between the two oceans, the wealth it would produce, the power it would give to the Spanish Crown, &c; but the only work actually executed for the purpose, was by the voluntary exertions of a country curate and his parishioners, in the west of New Granada; they dug a canal through the valley of *la Raspadura*, by which, in the rainy seasons a boat might pass from the head waters of the Atrato, a long and shallow river emptying into the Atlantic, to those of the San Juan, a stream of similar character, falling into the Pacific. The work however proved of no utility.

Since the overthrow of the Spanish power in America, the governments of the new Republics lying between the two seas, have been much occupied with the subject, though it must be confessed that they have done little more than issue vague decrees. The decree published to-day is, however, more precise, being founded upon minute information as to existing circumstances.

Humboldt, in his great work on Mexico, enumerates nine points or situations in which the waters of the two oceans are very near each other; and in three of them, he conceived, from the information in his possession, that a ship canal might be made.

The first of these situations is in Mexico, between Guazecualco near Vera Cruz on the Gulf of Mexico, and Tehuantepec on the Pacific. The country has, however, been explored since Humboldt wrote, and it is now certain that a high chain of mountains intervenes, rendering all communication by water impracticable.

The second is in Central America. The plan proposed is to improve the navigation of the river San Juan, by which vessels could ascend into the Lake of Nicaragua. The southwestern extremity of that lake is only thirty miles from the Pacific, to which a canal might be made. The difficulties, judging from the partial surveys which have been made, are not greater than those which have been already surmounted in many other cases; still the expense of the undertaking would be enormous. The country is uninhabited, and laborers, as well as tools of every sort, would have to be brought from abroad; in addition to which, the deadly nature of the climate would render the sacrifice of human life incalculable. Companies have however been formed for undertaking this work, and engineers sent out to examine the ground, have reported favorably. The government of Central America was in 1830 treatin with that of the Netherlands on the subject, but th revolutions which occurred in both countries put an end to the negotiation.

The third in the Isthmus of Panama, which forms a part of New Granada, is thesituation referred to in the decrees now before us. We can here form a better estimate of the difficulties to be evercome, and of the probability of success, as the country has been minutely examined with a view to this very object.—A survey was made in 1828–9 by an English engineer, Mr. Lloyd, and a Swedish officer, who were engaged for the purpose by Bolivar, and furnished with all the necessary instruments, of the most perfect order. Their account of the operations is published in the Royal Transactions of London for 1830, accompanied by maps and plans, and the utmost confidence is placed in its accuracy, by those who had the best means of forming a judgment.

The first question that occurs is as to the face of the country. Mr. Lloyd shows that "the spot where the Continent of America is reduced to its narrowest limits, is also distinguished by a break for a few miles, of the great chain of mountains, which otherwise extends, with but few exceptions, to its extreme northern and southern limits;" and that "the principal difficulty in establishing a communication between the two oceans, either by canal or railroad, would arise, not from mountains, but from the number of rivulets to be crossed; which, though dry in summer, become considerable streams in the winter or rainy seasons." He states moreover the curious fact, that a great portion of the country traversed in crossing the Isthmus, actually lies *below* the level of the Pacific.

Another great question determined by the two engineers, is that of the relative height of the two seas, or their difference of level, which difference had hitherto been supposed very great. The facts are as follows:—The time of high tide is nearly the same in both seas. The mean difference between high and low water in the Pacific at Panama, is about 21 feet; in the Atlantic, at Chagree, about a foot.—Finally, "in every twelve hours, commencing with the high tides, the level of the Pacific is first several feet higher than that of the Atlantic; it then becomes of the same height, and at low tide is several feet lower; they are then again equal, the Pacific afterwards becomes the higher, and so on."

The conclusions to be drawn from the accounts of the engineers, are, that a railroad is certainly practicable; and the lines on which two could be made, are traced on the map. Each road would begin on Chagres river, about 30 miles from its mouth, in the Atlantic; the one terminating at Panama, on the Pacific, the other and shorter, at Chorrera, from which a short canal would lead to the latter ocean. Neither road would probably exceed 80 miles in length. The river Chagres now admits no vessels drawing more than 12 feet, but it could easily be made to communicate with the safe and spacious bay of Limon, by which means large ships could discharge their cargoes at the commencement of the railroad. A canal for boats is also practicable, but a railroad would be preferable for several reasons.

As for a ship canal, it is certainly impracticable at this spot. Supposing no difficulties to exist within the Isthmus, the shallowness of the Pacific for some miles from the coast, would forbid the entrance of ships; and it would clearly be of no value, unless it could be passed by vessels which could navigate both oceans to advantage. In a political point of view, we, at least, should oppose the opening of such a communication, the possession of which, by any other great naval power, might be highly injurious to our interests; and that the greatest naval power would soon possess it, cannot be doubted. In the present state of the world, a railroad promises every advantage to New Granada, and to the commercial world in general, which can reasonably be desired; and the transportation of passengers and letters alone, would doubtless yield a large revenue, particularly if steam boats were established from the principal places on each sea, to the respective extremities of the road

OFFICIAL—DEPARTMENT OF STATE.

[*Translated for publication by order of the Secretary of State.*]

Decree of the Legislature of New Granada, authorizing the Executive to contract for the opening of a carriage road across the Isthmus of Panama.

The Senate and Chamber of Representatives of the Republic of New Grenada, in Congress assembled, considering—

1. That the Message from the Executive to Congress, of April 6th, 1833, does specially recommend the propriety of having a road for carriages opened across the Isthmus of Panama, from the Atlantic to the Pacific:

2. That the Chamber of the District of Panama took up this important subject on the 16th of June, 1831, and that nothing has yet been done to carry its wishes into effect:

3. That the Province of Panama has again taken into consideration this same project, at its meeting of October 13th, 1833, on the petition of a citizen of the Isthmus, who has proposed a means of opening a carriage road, by which goods may easily be transported from one sea to the other:

DO DECREE.

ARTICLE 1. The Executive is authorized to receive all propositions which may be made for opening a carriage road across the Isthmus of Panama; and also to sign a contract with any person or company soliciting it, on the conditions fixed by this Decree.

ART. 2. The undertakers will have leave granted them to open an ordinary carriage or Railroad across the Isthmus of Panama, from the Atlantic to the Pacific; and they may make use of any water course which may assist in forming the communication.

ART. 3. The road must be begun within two years at farthest after the privilege has been granted; the time in which it is to be finished will be stipulated in the contract.

ART. 4. If the road should pass over private lands, the owners shall be obliged to sell them at a fair price; that is, at what may be considered their value by arbitrators, at the time when the work is begun. If the land over which the road is to pass be public, (*valdia*,) it will be given without requiring indemnification.

ART. 5. The undertakers shall have the right to build warehouses or other edifices necessary for carrying into effect the objects of the enterprize, at convenient places, provided they do not interfere with the laws relative to fortifications. For such purposes, they may occupy as much land as may be necessary, no where, however, to exceed 10,000 square varas, (962 square yeards,) for which indemnification is to be made as by article 4th, or rent to be paid, when the owners decline selling the property.

ART. 6. The undertakers shall be allowed, as a fair remuneration, according to the species of road they may make, the enjoyment of the revenue from it, for a period not less than 10 years, nor more than 50.

(1.) The right of demanding toll shall begin the moment the road is finished, and the *maximum* of such toll shall be that expressed in the tariff granted by the Legislature of the Province of Panama.

(2) Should a rail-road be made, leave may be granted to the undertakers to place steam carriages on it; in which cases, it shall be settled in the contract what is the *maxmum* price to be demanded for the transportation of persons or goods, from one sea to the other.

ART. 7. The undertakers shall have granted them, as a recompense, public lands in the Isthmus, for cultivation, to the extent of 20,000 *fanegadas*, (about 100,000 acres) which they must begin to settle and cultivate within a year after they have received them; otherwise they will revert to the nation.

ART. 8. On the said 20,000 *fanegadas* of public and, foreigners may be established, who, for 20 years, shall be free from all taxes either on the land or its productions; nor shall they be required to do duty in the army, unless in case of foreign invasion.

ART. 9. Inhabitants of the Isthmus, or a company composed, in part of such, will have the preference, under the same circumstances, in receiving the contract.

ART. 10. The Executive shall exact from the undertakers, all the necessary securities for completing the work.

ART. 11. No contract which the Executive may make, can take effect without the approval of the Legislature.

BOGOTA, May 22, 1834.

[*Signed by the proper authorities.*]

Decree of the Executive for carrying the above Legislative Decree into effect.

I, Francisco de Paula Santander, President of the Republic of New Granada, in execution of the Legislative Decree of the 25th inst., authorizing the Executive to receive proposals for opening a road in the Isthmus of Panama, from the Atlantic to the Pacific, and fixing certain points, according to which, the contract is to be made and privileges granted to those who may undertake the said important work:

Considering that a period should be fixed for receiving proposals, after which the contract should be made with, and the privileges granted to, the person who offers the most advantageous conditions and the best security for their performance,

DO DECREE,

ART. 1. Those persons, whether natives of New Granada, or foreigners, who, in virtue of the Legislative Decree of the 25th inst. may wish to undertake the construction of a road across the Isthmus of Panama, either for ordinary carriages, or a rail road, and to secure the privileges which are to be the remuneration for their labored expense, will send their proposals, sealed and under cover, to the Department of the Interior and Foreign Affairs, before the 15th of January, 1835.

ART. 2. Those who may send such proposals, must appoint some one in this capital, with power and authority to sign the contract offered. The same person must be furnished with the means of proving that he who offers to undertake the work can carry it through, in case he receive the privilege.

ART. 3. In the cavelope of each set of proposals, shall be writen the object of the paper enclosed, and

the name or names of the persons desiring to undertake the work.

Art. 4. After the 15th of January, a day and hour shall be fixed for opening the said papers, at the Department o. the Interior and Foreign Relations, in presence of the respective attorneys or agents, and the contract will be signed with the person offering the best conditions and the strongest security, which contract will be submitted for the approval of Congress at its ensuing session.—*Bogota, May* 29 1834.

Francisco de Paula Santander,
Lino de Pombo, *President.*
Secretary of the Interior, &c.

Patent for an Improvement on the Mode of fixing Valves on the Boilers of Steam Engines. Granted to David B. Lee, city of Philadelphia, January 23.

The safely valve here patented is, we are informed, "a fixture for boilers for steam engines, to prevent *collapsation*, resembling the common safety valve, except that it opens in by the pressure of the atmosphere." And "the part claimed as an invention, or discovery, is not the particular form of the valve, but the general plan of fixing a valve, or valves, to boilers of steam engines, which shall open with an external pressure, to prevent collapsation."

A very little reading would have shown to the patentee the antiquity of his invention, as an account of it may be found in most, if not in all, of the numerous histories of the steam engine. We could take from our shelves a dozen books from which to quote upon this point, and could refer to numerous patents in which such valves are noticed. In the article *Steam Engine*, in Rees' Encyclopædia, after speaking of the safety valve in Watt's engine, it is observed, that "there is another valve of safety for the reverse of the object of the first mentioned safety valve; it opens internally, and is balanced by a small lever, and a sufficient weight to keep it shut, until the pressure of steam within the boiler becomes much less than the external air, which then forces open the valve, and enters into the boiler till the equilibrium is restored. It is evident that this valve can never be necessary so long as the engine is at work; but its use is to prevent the sides of the boiler being crushed in by the weight of the air, when it has done work, and the steam within it cools and condenses."

This kind of valve has, in fact, been applied to hundreds of boilers, stills, &c. With the kind of boilers which we now ordinarily use in steam engines, valves of this kind are not employed, for the simple reason that they would be of no use. Our cylindrical iron boilers do not collapse by the pressure of the atmosphere, which they would be able to sustain, even if perfectly exhausted; nor is the collapsing which frequently takes place, a collapse of the boiler, as the patentee appears to suppose, but of that of the flue which passes through it, and which is forced in, not by the pressure of the atmosphere, but by that of high steam, occasioned in general by the water being allowed to descend too low, which admits of the heating of the upper part of the flue, and the consequent diminution of its strength; it then yields readily to a pressure, which, under ordinary circumstances, it would have sustained most effectually.—[Journal of the Franklin Institute.]

Scotland.—Historical Memoranda.—No country has made more progress in agricultural improvement, and in multiplying the comforts of life, than Scotland during the last fifty years. The Rev. C. Peebles, in his statistical account of Maine, in Angus, draws a curious comparison between the farmers in 1760, when he came among them, and 1790. The following are a few points:

1760.	1790.
Land ploughed with oxen. Only a few horses kept to draw the harrow in seed time, and bring in the corn in harvest. 7*l.* thought a great price for a horse.	Oxen not employed in agriculture. Farmers have their saddle horses, worth from 24 to 30*l.*, and work horses from 20 to 35*l.* each.
Land rented for 6*s.* per acre, and only two small farms enclosed.	Land at 30*s.* and all enclosed with dykes and thorn hedges.
No English cloth worn but by the minister and a Quaker.	There are few who do not wear English cloth, and several the best superfine.
Men's stockings were what were called plaiding hose, made of woolen cloth. The women wore coarse plaids. Not a cloak or a bonnet was worn by any woman in the whole parish.	Cotton and thread stockings are worn by both sexes, masters and servants. The women who wear plaids have them fine and faced with silk. Silk plaids, cloaks and bonnets, are very numerous.
Only two hats in the parish. The men wore cloth bonnets.	Few bonnets are worn, and the bonnet-maker's trade is given up.
There was only one eight-day clock in the parish, six watches, and one tea-kettle.	Thirty clocks, one hundred watches, and above sixty tea-kettles.
The people never visited each other except at Christmas. The entertainment was broth and beef, and the visitors sent to some ale-house for five or six pints of ale, and were merry over it without any ceremony.	People visit each other often. Six or seven dishes are set on the table differently dressed. After dinner a bowl of rum punch or whiskey toddy is drank,—then tea, then another bowl, then supper, and, after that, the grace drink.

A new work.—Major Henry Lee, of Virginia, has, we learn, been for some years past engaged in preparing, with great labor, from a rich store of materials, a Life of Napoleon From the following announciation in Galignani's Messenger of June 19, we learn that the first volume of the work has gone to press at Paris:

"In the press, and very shortly will be published by A. and W. Galignani & Co., No. 18, rue Vivienne, the first volume of the 'Life of the Emperor Napoleon, with an appendix, containing an examination of Sir Walter Scott's 'Life of Napoleon Bonaparte,' and a notice of the principal errors of other writers respecting his character and conduct; by H. Lee.

"Vir neque stlendus,
Neque dicendus sine cura,—aliquando
Fortuna, semper animo maximus.
Vell Paterculus. l. 2. c. 18.

"Quelques parcelles de tant de gloirie parvient drontelles aux siecles a venir? ou le mensonge, la colomnie, le crime, prevaudront-ils?"
Napoleon à Ste. Helena."

The distinguished literary ability of the author, with the great advantages which he has enjoyed over every other biographer, and his freedom from any thing like national prejudice in reference to the history of the careeer of Napoleon, will give an interest to this over most other histories of the Revolutionary era, the civil reforms which preceded it, and the gigantic wars in which the power of Napoleon was overthrown, We learn from a friend at Paris, that "Major Lee has devoted himself, with untiring diligence, to the pursuit of truth in regard to the object of his work. His inducement to this publication has not been so much the desire of gain, or the promise of literary fame, as the hope, the great and only hope, that he may prove instrumental in vindicating from unparalleled injustice the fame of the greatest man, of whom the history of the human race preserves any record; a man whose career was one continued opposition to the worst passions, and active promotion of the best interest of his country and his species—who never really belied an enemy, nor betrayed a friend." Such are the enthusiastic terms in which one, who has watched the progress of Mr. Lee's work, speaks of the subject, and in which probably Mr. Lee would himself speak of it.

We suppose it will not be long, after the publication of the work at Paris, before copies of it reach this country; when we shall endeavor to make our readers further acquainted with it.—[Nat. Intel.]

Whale ships at the Sandwich Islands.—The Sailors' Magazine for August contains a long communication from Wm. Richards and Ephraim Spaulding, Missionaries at Lahaina, (Sandwich Islands,) from which it appears that the first whale ships which ever visited the Sandwich Islands, were the Balena, Captain Gardner of New Bedford, and Equator, Capt. Folger, of Nantucket. This was in the autumn of 1819. While lying at anchor in Kealakekua Bay (Hawaii), they took a large whale which made 110 bbls. of oil. Since the autumn of 1823, a complete list has been kept by the Missionaries, of the ships which have recruited at Lahaina, (Island of Maini,) and probably still greater numbers have recruited at Honoluln (Island of Oahu.) The whole number at Lahaina from the middle of 1823 to the end of 1833, ten years, is 514, incluing 218 different ships. In the spring of 1831, there were 38 ships at anchor in that harbor at one time. The number of ships which recruited there in 1833, was 82; 30 in the spring, and 52 in the Fall. Aggregate of oil on board, at the time of their calls respectively, 74,390 bbls. Aggregate taken by the 52 autumn ships during the season, 27,340 bbls., averaging for each ship a little more than 525 bbls. "From these facts," say the Missionaries, "it will readily be seen that, though the average quantity taken by each ship the past season is less than in some former seasons, the whale fishery is still in a very prosperous state; and considering the great demand for Sperm oil in America and Europe, it was never more profitable."

The number of seamen generally in port, rendered it disirable, in the view of the Missionaries, that a reading room should be provided for their accommodation; and accordingly a building has been erected, 32 feet by 20, on the missionary premises, for masters and officers, and another about 10 rods distant, 24 feet square, for the crews. The first cost of the buildings was about $720; of which $200 was paid by the Missionaries, $215 by shipmasters, and the remainder, it was presumed, would be contributed by other ship-masters, as they should successively arrive in port. "As it regards social intercourse between the Missionaries at this station and seamen during the past year," says the letter, "it has been uncommonly cordial and pleasant. Masters generally have been very kind, and some in addition to their subscription for the reading-rooms, have been generous in making us presents of such things as were necessary in our families, an acknowledgement of which we shall gratefully make to the American Board."

Population of Utica.—A census of this city has just been taken under the direction of the Common Council, and we are highly gratified in being able to give the following as the result:

First Ward, - - - -	1,495
Second do. - - - -	1,882
Third do. - - - -	2,764
Fourth do. - - - -	3,978

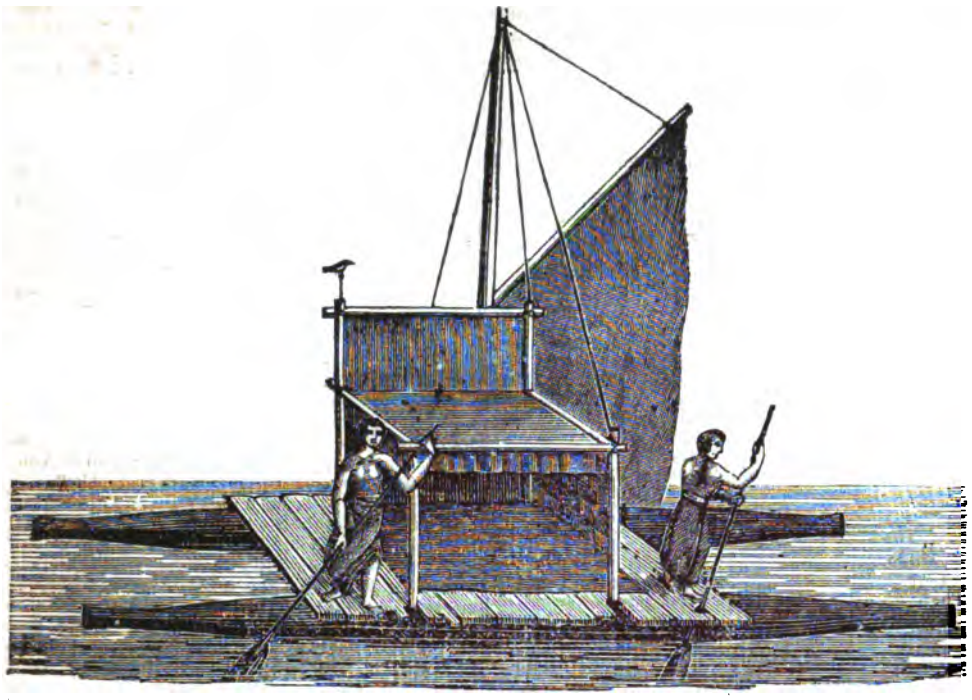
Making the aggregate *ten thousand one hundred and nineteen;* which is the population of Utica at this time. The number of inhabitants in this city, according to the census of 1830, was eight thousand three hundred and thirty-three; which shows an increase, within the last four years, of *eighteen hundred*, lacking four. This result is the more gratifying, as it is, in a degree, unexpected. Some persons, whose apprehensions are always *rather lively*, have been in the habit of *croaking* about the "prospects of Utica." The facts, however, instead of warranting any complaint on our part, are calculated to inspire the highest confidence in the stability of our city—as the census just taken exhibits an increase in the four last years, of nearly 22 per cent. in our population. For the next four years, our growth will undoubtedly be still more rapid, as the termination of the public works at this city, now in progress, will not only furnish employment to an increased population, but will warrant the erection of additional buildings, and give a stimulus to enterprize in every form.—[Oneida Whig.]

THE DISTANT HOME.

Once on a cloudless summer's eve,
I stood on Snaefield's island steep;—
The light which dying sunbeams leave,
Was fading from the western deep;
The mountains of my native land
Rose dimly o'er the distant sea,
Whose waters press'd the golden strand
In sunset's blue tranquillity.

No sound was on the breezeless height,
Save the glad voice of infant rills
Which wander'd in the waning light,
Rejoicing down the pleasant hills;
Though faint and far the day-light burn'd,
And gray mists chill'd the desert air,
To western skies I fondly turn'd—
My homeward gaze still rested there.

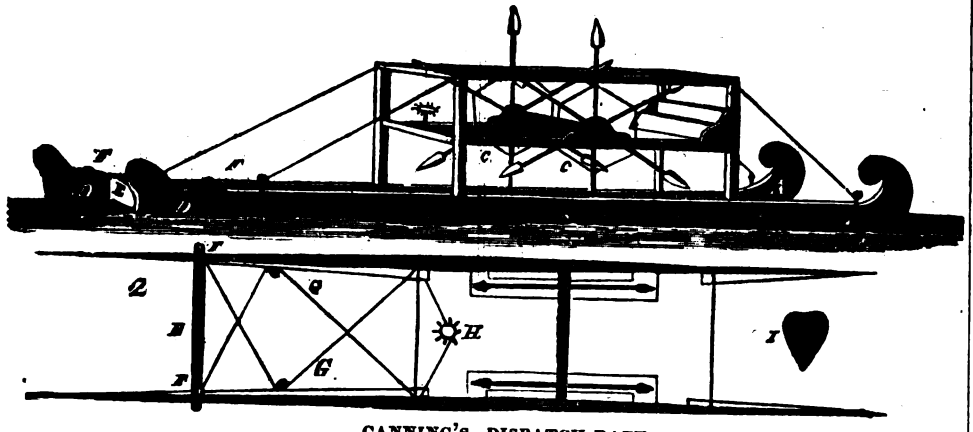
And thus, methought, the child of faith,
When joys depart and hopes decline,
Sees, rising o'er the gulf of death,
Unfuding kingdoms brightly shine;—
The cloud which veil'd the surging wave—
The blast which raised the breaker's foam,
Pass off, and show beyond the grave,
The glories of his radiant home.



A DOUBLE CANOE OF THE FRIENDLY ISLANDS.

[*From the Mechanics' Magazine.*]

The great utility of Mr. Burden's plan, or invention, or adaptation to navigation, (we hardly know what to call it,) has called forth a host of competitors, all desirous of proving that they had the same plan already prepared to come out with when an opportunity should occur which they might consider advantageous. We insert Mr. Canning's claim, and shall, next month, insert some others, introducing now an engraving, handed to us by an esteemed friend, of a boat in use at the Friendly Islands, so long ago as 1798, of a similar construction. It is copied from an engraving in Labillardiere's account of a voyage in search of La Perouse, the French traveller. Monsieur Labillardiere states that a great number of the natives came out to them in boats constructed in a similar manner.



CANNING'S DISPATCH-RAFT.

A A represent floaters. B, the deck. C C, paddle wheels. D D, rudders, connected by E, a board about 7 inches wide, with a hole near each end, into which insert the nipples, F F. F F, G G, till ropes, which pass over H, the tiller wheel. I, cross-section of floater or trunk.

In order to give a due degree of buoyancy to the floaters, I had them hollowed into chambers of 14 inches long, 10 inches deep, and 4 inches wide, leaving solid parts of 3 inches between. This raft was destroyed while afloat on the Seine river, (owing to the culpable negligence of the person who had it in charge,) by a loaded barge, which came in violent contact with it. I shortly afterwards constructed another upon the same principle, but much larger, and instead of floaters, similar to the first, made use of troughs formed of half inch deal boards, which I found also to answer well. When my raft was almost finished, as I was one day trying its rate of going, opposite the Champs Elysees, in company with a friend, and my little son (about three years old), a French steamboat, on board of which was the proprietor and a large party, evidently quitted its original course, dashed with tremendous force upon the starboard quarter of the raft, and broke it up in a twinkling, submerging the deck, upon which the child was placed, who, but for instant vigorous exertion, would, with my friend, have been drowned, as the current runs with extreme rapidity in that part of the river. My friend and the youth were received on board by the steamer. I preferred remaining upon the wreck, which I with difficulty got ashore, at a considerable distance from where the collision took place.

I soon after re-constructed my raft, and substituted for the troughs a double row of small barrels, twenty-eight in number, varying in size, placing the largest the fourth from the bows; these I boarded over with half inch deal boards, forming long staves, which were screwed down to the barrels. The ends of the boards projected beyond the barrels at both ends of the trunks, so as to form stems and sterns. The interstices, between the heads of the barrels and the outside planks, were filled up with a mixture of pitch, tar, cork shavings, saw dust, and resin.

This raft was greatly admired. I had the honor of receiving our veteran hero, Sir Sydney Smith, with a host of distinguished English and French, on board at various times, who all seemed to approve highly of the principle upon which it was constructed—considering that it would insure personal safety in an eminent degree, as it was neither liable to sink nor upset, while its rate of going was much greater than any other sailing craft, and it afforded an incomparably more commodious place for passengers than a boat of ordinary build.

I next contemplated the construction of a still larger raft, to be propelled by steam, but, for the reasons already assigned in my former communication, I was not able to procure permission from the Prefect of the Seine. I soon afterwards sold my raft to Colonel, now General Trobriand, and Mr. Mallet, to run as a pleasure raft upon the celebrated lake of Montmorency.

The 20th of last December, (consequently prior to any account of the raft constructed by Mr. Burden being received in this country,) I commenced the construction of a small raft of the kind for my own use, to run upon the Thames. It is almost finished, and would have been some time back, but for circumstances not connected with the affair. I remain, sir,

ALFRED CANNING.

Crown Coffee-House, Holborn, April 17, 1834.

AERIAL STEAMBOAT.—We find the following in the Cincinnati Daily Gazette.

Mr. Editor,—Perhaps it is not generally known, that one of our ingenious citizens has invented, and has now in preparation, the *model* of an *aerial steamboat*, in which he proposes to ascend.

Although but little expectation of the success of the experiment is entertained by the writer of this article, it is worthy the attention and examination of the scientific. The inventor, Mr. Mason, is very sanguine, having already made (to him) a satisfactory experiment.

The boat is about ten feet long, the ribs being covered with silk, in order to render it very light. The engine, of two horse power, is placed in the middle, and turns four vertical shafts projecting over the *bow* and *stern*, into each of which are fixed four spiral silken wings, which are made to revolve with a sufficient velocity to cause the vessel to rise. Over the whole is fixed a moveable silken cover, designed to assist in counteracting the gravitating force, at the same time tending to assist in its propulsion forward.

The whole boat, including the engine, weighs 60 pounds, and has cost about $300. it is the design of the *inventor* to *attempt* an aerial excursion, of which due notice will be given. J. L.

AGRICULTURE, &c.

DISEASES OF SHEEP AND COWS.—Sheep and cattle, like the human family, are subject to a variety of diseases: but it is not my intention to notice more than one or two. There is a disease to which sheep are subject, that is probably more destructive to them than is generally supposed—that of the worm in the head. I have not unfrequently had sheep that were fat, that looked healthy and well, to sicken and die in the course of a few days; and under the impression that they had eaten something poisonous, such things were given them as are generally recommended in books for poison, but with no advantage. Having purchased some Bakewell and Southdown sheep at from $20 to $30 each, has probably induced me to pay rather more attention to my sheep than otherwise I should. One very cold day, winter before last, I saw a half Bakewell ewe standing in the snow about fifty yards from a shelter that had been erected for my sheep, and under which they had usually slept. Her head was down, and occasionally she moved a little. Supposing that she had a young lamb, I walked that course with a view of having the lamb moved to the shelter; but as I approached her, she did not appear to observe me. I took hold of her and she appeared too stupid to notice it. Her head was inclined a little to one side, her eyes glared and appeared almost fixed in their orbits. She was found too stupid to be driven to the fold, and had to be carried. She lived several days; at first she had slight spasms, and foamed a little at the mouth, but after a day or two, she was more convulsed, and would fall down, but would again get up. Supposing her head to be the seat of the disease, after her death it was dissected, and a worm was found in one of the nostrils, a little below the eye, about an inch in length and a quarter of an inch in thickness. Supposing that one alone had killed her, very little examination further was made. In January last, two sheep on the same morning appeared to be sick, one a ewe of the common breed, in fine order, the other a half Bakewell ewe, and fat. The common ewe held her head as high or higher than usual, with it a little inclined to one side, the eyes resembled those of the one already described: on approaching her, she appeared a little stupid, would suffer me to approach very near, and then suddenly dart off as if she had just perceived me. The other held her head rather lower than usual, and suffered me to approach her rather nearer than the other, and appeared more stupid and sick, with no glaring of the eyes. Next day both of them were evidently worse, and the common ewe disposed to hang her head; and on the third day she laid down to get up no more. The glare of the eyes continued, the pupil became enlarged, spasms came on, and a little foam was observed about the mouth. The spasms were first observed to throw the left ear in motion, then the left eye lid, quickly after which it appeared all over the face, head, and neck, but as she was lying down the force of the spasms upon the body could not be seen as upon the one the winter before. The morning she died, I was about leaving home when I was informed she was dead; but I requested her head to be examined to see if any worm could be found. On my return a worm was brought me, about the size of the one already described, and it was stated it was taken out of the head between the eyes. I think it not improbable there might have been many more. The half Bakewell appeared more stupid and sick every day, and held her head lower and lower, until her nose almost rested on the ground as she stood up. I saw her but a few times after the death of the other, but I think towards the last, the symptoms were very much like the other two. About a day and a half after the death of the other, I was informed the half Bakewell was dying. As night was fast coming on, and the weather was extremely cold, it was thought best to have the sheep killed and skinned while warm, after which the body was examined, but nothing found amiss. It was getting too dark to dissect the head, and that was laid by for morning. In dissecting, it was found filled with blood, having been knocked on the head with an axe to kill it. Under this disadvantage it was dissected, and from the head were taken nineteen worms. Some were found high up the nostrils, some in the different cavities of the head, and one large one was found lying on the thin membrane that envelopes the brain; they were of all lengths, from a quarter of an inch to an inch. They were placed upon a piece of paper, and none appeared to be alive: but afterwards, while looking at them by the fire, many were found to move. It appears strange that so many should have been found in the head of one sheep, and that one quite fat. Whether it was their particular location, or like the grubs in the horse, they remain for a time peaceable and inoffensive, and then suddenly destroy life, I must leave for the reflection of others. The worm is supposed to be the produce of a fly which deposites its eggs a little within the margin of the nose, to avoid which is the cause why sheep gather together, and turn their noses inwards. Daubing the nose often with tar or train oil is said to be a preventive. About a table spoonful of a decoction of Scotch snuff injected up each nostril with a syringe, three or four times from the 1st of October to the 1st of January, is said to be a good remedy, but is apt to make the sheep very drunk for some time. I cannot say I have much confidence in either the preventive or remedy proving effectual.

I will now notice one disease to which the cow is subject, that of an inflammation of the udder. I have frequently heard it stated, that it is produced from the snake sucking the cow. The snake is supposed to be fond of milk, but as to any familiarity between the snake and the cow, I have never believed in it. The snake is more like Ishmael of old, whose hand was "against every man, and every man's hand against him." This disease is not very uncommon to cows. A few years past, one of the finest cows upon my farm (a half Durham) became diseased in one quarter of her udder, and not knowing at the time the cause or remedy, that quarter gradually perished away, and has never since produced milk. To show the cause, the symptoms, and cure of this disease, I will make an extract from a treatise on stock, which was published in England, by J. B. Lawrence, and which has recently been republished in this country.

"*Downfall, udder-ill, inflammation of the udder, &c.*—From what we have said of the digestive process of the cow, and the intimate connection between the fourth stomach and the udder, the reader will be at no loss to understand that when that is out of order, the udder, and consequently the quality and quantity of the milk, must be materially affected. These, or rather this complaint, for they are all one, or different stages of the same disease, of which the predisposing cause was bad feeding, and the exciting cause a cold or inflammation of the udder, is essential to be taken in time, and of the utmost consequence to the owners of young cattle, which are very liable to its attack, especially at the time of calving."

"*Cause.*—This disease may not only proceed from the above causes, but may also be induced by the animal drinking freely of cold water, when heated by exercise, or by cold exposure, and lying down in cold and damp grass at the latter end of the year, when the nights are cold and foggy, and at a time when the stomach is loaded with food, and the blood plentiful."

"*Symptoms.*—One or more quarters of the udder become swollen, hardened, hotter than common, and painful when pressed; the milk is reduced in quantity, and changed to a ragged, or bloody, or corrupt appearance. At other times, the secretion of milk is stopped, and the tumefied quarter proceeds to a state of suppuration."

"*Cure.*—As soon as the disease is discovered, remove the animal from the pasture, and take from her from three to five quarts of blood; especially if the cow be in good condition, and breathes quickly, and appears stupid." "If the weather be damp and cold, keep her under shelter, and feed her moderately with nourishing food; but if the weather be fine, turn her into a bare pasture, where she will be obliged to exert herself for her food. The swollen udder, or rather that part of it which is affected, (for there is seldom more than one part or quarter affected at a time,) should have the bad milk drawn from it three or four times a day; for if suffered to remain in it, it will irritate and increase the inflammation. Bathe it also after milking with olive oil, or elder ointment."

The same writer recommends medicine to be given internally. His doses are compounds, and the ingredients are not generally kept by farmers, but as epsom salts enter largely into some of them, I imagine they would answer alone. My own impression is, that the best care would be to let the calf run with the mother during the continuance of the inflammation, provided it would suck all the teats.

Extract from the same writer:

"*Sore teats.*—Some cows are very subject to sore teats, particularly such as have newly calved; if this be the case in summer, they often become ulcerated, and the flies plague them to a degree which renders them extremely difficult to milk: it is also a great nuisance at the time of milking, as blood and corrupt matter are apt to pass between the fingers into the milk. The following liniment is very useful for anointing sore teats, and should always be kept in readiness for use:

"Ointment of elder four ounces, yellow basilicon ointment four ounces, spirits of turpentine one ounce, mix and well incorporate them together on a slab, and it is fit for use.

"With this ointment you may well rub the cow's teats every night and morning after milking, if in the summer assafœtida or aloes in powder, and dissolve it along with the ointment. This will prevent the flies from teasing the animal. If the teats be tender only, and not sore, a little gentle rubbing with weak salt and water will in general be sufficient." Finding it inconvenient to prepare the ointment exactly as directed in the foregoing receipt, a handful of the inner bark of the elder was taken and simmered in hogs' lard. Six ounces of the elder ointment was then taken, and while it was warm, one ounce of bees wax and one ounce of turpentine were added, and melted together. After being stirred awhile, the turpentine mostly sunk to the bottom and was thrown out: one ounce of spirits of turpentine was then added, and the whole stirred as long as it was in a liquid state. After the ointment was made, a little boy that had fallen to sleep in the room was waked up to go to bed, he was found unable to walk without assistance, in consequence of his feet being so much chopped and inflamed; they were rubbed with the ointment, and by the morning there was no appearance of inflammation, and the skin was soft and supple, and they soon got well. Though this ointment is not prepared in the way directed, the same ingredients are used and almost exactly in the same proportions. It is an excellent ointment for man or beast, and should be kept in every family. EDMUND F. NOEL.—[Farmers' Register.]

[*From the New York Farmer.*]

STEAM APPLIED TO AGRICULTURAL PURPOSES.—We have heretofore expressed our opinions on this subject. We now state, that if the scientific ingenuity and the capital of this country could be combined, and steam immediately applied to agriculture—and that, if prejudices should retard its application in Europe,—we

should, in comparatively few years, cause every principal nation in the world to crush by the weight of their own institutions. But Europe will, and *must*, have the plough driven by steam. From an article in the Quarterly Journal of Agriculture, we make the subjoined extracts.

From the Parliamentary returns, the horses running in coaches in Great Britain, in 1828, amounted to 178,841; and we are perhaps much within the mark when we suppose that these, with all the horses employed in drays or draught, exclusively amount to 600,000. It is said by some, that each horse consumes what will support eight individuals. The suppression, therefore, of these horses alone, (which does not include one horse employed in agriculture or for pleasure,) will save what will feed 4,800,000 people. The annual consumption of grain, by human mouths, in Great Britain, (viz. 16,000,000,) is about 32,000,000 quarters, of which not one-twentieth part has, during any year, been imported. But the saving of what would feed, by the removal of the horses used for transit alone, 4,800,000 people, amounts to more than what is consumed by the fourth part of the said population. If importation of grain, then, to the very limited extent of one-twentienth, viz., 1,600,000 quarters, has hitherto been deemed an evil of no little magnitude by the agricultural interest, what will they consider a system which will abridge home consumption equal to one-fourth, viz. 9,600,000 quarters? At first sight this will appear to the agriculturist as involving more certain and complete ruin than even that which would follow the repeal of the corn laws. But this is taking a narrow, a prejudiced view of the matter.

The application of steam to purposes of husbandry will so cheapen the cost of production, as to reduce the price of food with remuneration to the growers. It is well known, that the expense of horses forms the principal item in the outgoings of the farmer. The late Dr. Colquhoun, so far back as the year 1812, in the estimate which he makes of the new property created annually in Great Britain and Ireland, taking each kind of grain at 50 per cent. less than the average prices in the public markets of the 12th September, states the crop of hay, grass, straw, and vetches, as amounting in value to £89,200,000.

And the portion of this consumed by horses was as follows:

Horses in Great Britain and Ireland, estimated at 1,800,000, at 45s. each for grass,	£4,050,000 0 0
For hay, at £6 each, - -	10,800,000 0 0
For straw, at 5s. each, - -	450,000 0 0
For beans and peas, - -	2,640,666 13 4
No separate item is given for corn, but taking the half of that consumed by animals generally, as consumed by horses, viz., £14,790,000,	7,395,000 0 0
We have - - - -	£25,335,666 13 4

—which is substracted from the above, purely to support the brute labor which it is now possible to supplant, in a great measure, by steam. When it is farther considered how much horses have multiplied since the period mentioned, it is perhaps speaking greatly within bounds, when we suppose they are maintained at a yearly expenditure of £30,000,000. It is not difficult then to perceive, how the suppression of horses, either in whole or in part, will economise a saving in farm management sufficient to effect a great cheapening of agricultural produce with advantage to the producer, and benefit to the consumer.

Though difficulties exist in the minds of agriculturists, who have not turned their attention to the subject, as to the possibility of extending steam to husbandry purposes, no difficulties exist in the opinions of many eminent machinists who have turned their attention to it. We have had conversations with several patentees, who have each assured us that there are no practical difficulties in the case, provided there was any inducement for them to direct their skill to such a species of machinery. Mr. Phillips' getomic apparatus, the model of which we have seen, though far from being a perfect machine, is yet sufficient to show that a little farther simplification is all that is required to render it such. We are happy to say, that, in our notions respecting steam-ploughing, whether as regards its practicability or importance, we are corroborated by a Fifeshire farmer, who, in a letter of the date 24th December, 1833, published in the Fife Herald, remarks, "that at present, when the ingenuity of man is upon the stretch to devise means to abridge human labor, and add to the comforts and intelligence of a redundant and still increasing population—when, by our absurd laws, the manufacturer is under the necessity of giving an extravagant price for the first necessaries of life—when industry is fettered, and the growing resources of the country are circumscribed, our tenantry wasting their time and means, and crouching under the power of their proprietors, on account of a corn monopoly,—I wonder it never struck some of our agriculturists that they might, like the manufacturers, endeavor to undersell their neighbors, and drive them out of the market. I know it will be said, that it is impossible—but what I am going to suggest is a farther extension of machinery, to assist us in keeping ourselves ahead of our neighbors, and that is the application of steam to the working of ploughs. At present, it requires nearly the half of the produce of a farm to pay the necessary expenses, and a great part of that goes to the keeping of horses, harness, &c. Now, if the farmer could get a steam-engine to work his ploughs, harrows, and rollers—thrash and shear his corn—cast his drains, and rid his land of large stones,—he would be able to pay his present rent, although there were no corn-laws, and grain one-third cheaper than it is."

We have gone into this detail, not because we advocate the application of steam to general locomotive purposes, merely from the love of change, without any other reason than that change is the order of the day: no, but because there are numerous weighty, and what ought to be *imperative* reasons, for the agricultural classes giving this matter their deep and serious attention. From the whole course of events, no man can be so blind as not to perceive that, upon the subject of the corn laws, the agricultural and manufacturing classes are about to come shortly into a fearful collision. Cheap bread is a thing that our starving and oppressed people must have, either by a cheaper system of cultivation at home, or by importation of corn from abroad. The alternative is the choice between the life and the death of the State. For surely it is madness amounting in degree to theirs whom the ancients conceived were doomed to perish, to suppose that cheap bread, by a method that will ruin our domestic agriculture, will not precipitate the country into that state of social disunion which the whole tendency of our affairs shows to be in course of progression. Now, let it be supposed that steam has had nothing to do in maturing this condition. During the last quarter of a century, it has been applied to what may be called *physical* purposes only, *i. e.*, to purposes which have materially abridged manual labor, and multiplied almost indefinitely every species of commodity, whilst it has not been applied to any one purpose that has increased human labor, or saved the consumption, and cheapened the production of food. Consequently there has been a gradual disapproximation between the necessaries and the conveniences of life, until, after nineteen years of peace, and what ought to have proved financial recruitment, it has reached an extent which has unbalanced consumption and production to a degree which is paralysing all commercial and agricultural transactions, fearfully increasing pauperism and crime, fomenting sedition, and threatening the peace, order, and best interests, social and civil, of society.

The extension of steam to *economic* purposes, *i. e.*, to purposes which will permit the removal of brute labor, will remedy the evils arising from its partial application; for, as we have shown, it will save and cheapen food, and that by a way which, over and above its improvement of internal communication, will improve the coal trade and iron trade, those pillars upon which the prosperity of the country is said to rest, as well as every department of manual industry. Applied exclusively to physical purposes, machinery as yet has, with all its advantages, been attended by evils far from being partial. Extended further to economic purposes, the good that will follow will not be short of universal. Hitherto its abuse, that is to say its former application, alone has been pernicious; now its use, that is to say, its latter application, will be commensurately beneficial. Machinery has made goods,—machinery also must make a market. The existing circumstancees of society demand this, otherwise all will terminate in convulsion.

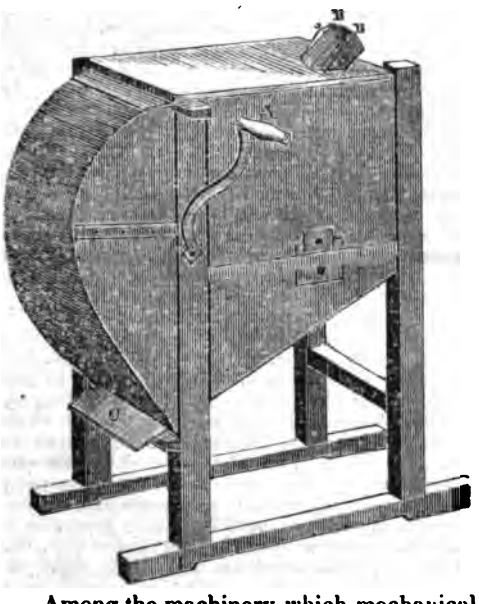
There is not a laborer in the three kingdoms who does not feed his belly at the expense of his back. This is an evil of no trifling character, for it is one which affects the entire industry of the country; and farther, it is one which, for the interest of all parties, ought to be removed without loss of time.

In order more effectually to promote this object, and carry the project extensively into operation, A NATIONAL INSTITUTION OF LOCOMOTION, unconnected with any trading company, is now in progress of being formed to promote the application of steam to general purposes of transport and husbandry, and to supply the desideratum which has long been experienced of there being no metropolitan association, in connection with the various companies and local societies throughout the united kingdom, formed for the advancement of commerce and agriculture.

When we consider how exigent is the WANT which steam applied to economic uses is commissioned to alleviate, and how reckless in its consequences, as that volcano indicates whose eruptions are now nightly visible in the farmyards of some district or other of the country, we consider it fortunate that, if CHEAP BREAD be wholly unavoidable, it can now be procured in a way that makes it wholly desirable. The bane of having prices reduced by steam transport, and the antidote of providing for the same by steam husbandry, are both before our agriculturists. We cannot suppose that they will allow the one to be introduced unaccompanied by the other. In the hope that this will be the case, we cannot conclude this paper without congratulating all orders of our fellow-subjects upon the bright prospects which the general application of steam to brute labor purposes opens upon us. At a moment when the resources of the country are no longer adequate to the wants of our population, "WHEN A RESTLESS SPIRIT OF DISCONTENT IS EVERYWHERE ABROAD," and cheap food of *home growth* is a *sine qua non* to an ameliorated condition, this beneficent agent steps in to accomplish what could not have been effected by any *external* process whatever. The speedy and general introduction of steam cultivation is all that is required to make cheap bread in Britain, in a way that will reduce no one to destitution in Britain. If our industrious classes must still earn and eat their bread by the sweat of their brow, they shall nevertheless eat it in plenty, and in contentment. Under the social economy which the extension of steam to the purposes of animal labor will allow, it shall no longer be said that the wealthiest empire in the world is also the most wretched one, or that, with all our boasted wisdom in science and art, we are unwise in that which not rightly to know is misery and unhappiness! The better policy of the age of steam must be to make millions rich instead of the units,—to render monopoly the property of the state and

not of the stock-jobber,—to comfort a thousand happy homes, instead of building up one bloated capitalist. Steam, which, confined to physical purposes, hitherto has wrought such marvels, extended further to economic uses, can achieve all this, for by *home means*, equalizing the price of necessaries and conveniences, it WILL ADJUST PRODUCTION AND CONSUMPTION; the unbalanced condition of which alone has deranged the currency,—paralyzed transaction,—abridged industry; and, in a word, occasioned all those evils which at length have produced a nation divided into usurers and paupers, to the danger alike of the constitution, the altar, and the throne. R. B.

Corn-Shellers, Corn-Crackers, and Turnip-Cutters. [Communicated for the New-York Farmer and American Gardener's Magazine.]



Among the machinery which mechanical ingenuity has furnished the farmer, to expedite farming operations, is the Corn-Sheller. They are constructed to shell either one or two ears at a time. They require two persons, and will shell perfectly clean, and nearly as fast as one can put in the ears; consequently the number of bushels in a day must be very considerable. Some of them, as in the present drawing, have the shelling apparatus incased, to prevent the corn from being scattered. B B are the two openings into which the ears are dropped; A, the turning crank; C, the opening at which the corn comes out. The prices for substantially built machines vary from 8 to 15 dollars.

H. Huxley & Co., 81 Barclay street, have affixed to the Corn-Shellers a simple apparatus for cutting turnips and potatoes for stock. They are also appending one for cracking the corn.

THE WILD OR CANDLEBERRY MYRTLE, A REMEDY AGAINST THE WEEVIL.—[We should suppose myrtle equally beneficial to wheat.]

Dear Sir,—Information on all and any subject, connected with agricultural pursuits, will, I presume, find admittance into your periodical, and although the notice may be of apparently small matters, yet to some one of your readers it may be new, and let me add, valuable. I am induced to make these remarks from the inconvenience I suffered for many years, from the destruction of my corn by weevil, and the total absence of them now, in consequence of the application of a very simple remedy. The land which I plant in corn is low, and requires almost as much draining as the river lands, but is productive, and yields abundant crops. Whether it is owing to the location of the land, or other (to me) unknown causes, I am unable to say, but the fact is, that the corn is often taken from the field with a great many weevil in it. No injury seemed to result from their residence in it, while in the field, or during the cold weather, but as soon as the summer's sun had shed his genial warmth upon us, these intruders gave notice of their existence, by commencing the work of destruction. Upon several occasions my provisions were materially injured, and much complained of by the consumers. I tried a variety of remedies, without effect. Late planting, and early planting, were both suggested and tried; the land was all broken up deep in the winter with a plough; the seed was coated with tar and soot, and finally was brought from one of the sea-islands at a distance and planted. The crops, I think, were improved by each of the remedies in quantity, but the enemy still retained his position, unmoved, and apparently immovable. I was one day mentioning the circumstance to a friend, who told me that he had understood that the wild myrtle, (Myrica cerifera,) was a sovereign remedy for this seemingly incurable disease. At this time the destruction had commenced, and the insects were to be seen in every direction; a quantity of myrtle was procured, and spread over the top of the corn, and directions given to follow it up, if any effect was visible. My removal to town for the summer prevented my attending to the business any farther, and I learned upon inquiry in the fall, that "it *seemed* to check the weevil in some degree." This was not satisfactory, and as the corn in the field was apparently more than usually infested, I determined to give the experiment a fair trial. The corn-house was emptied, and swept, and washed with boiling water; the floor was then covered with myrtle; a layer of corn about a foot deep was then brought in, and then a layer of myrtle, and this management continued throughout the whole harvest, observing to cover the top of the corn with a bed of these little bushes. During the winter I several times examined the corn, near the door, and saw no weevil, yet I was fearful, that in the body of the house the mischief might still be going on. Late in the spring we began to use the corn freely, and still found no weevil; the crop was eventually consumed, and was to the last entirely free from insects of all and every kind.

This was to me satisfactory, and the rule has been uniformly observed of strewing the house with myrtle, and no weevil have since been seen. My corn-house is divided into two bins, and an entry; and this year I had planted a small field alone, and desired that it might be kept separate. Into this entry it was thrown, and no myrtle was put with it, but the two bins were as usual well supplied. Upon my examining the corn-house, I found the corn in the entry filled with weevil, while that in the bins was perfectly free from all insects. The corn was immediately removed, and though filled with insects, was divided between the two bins, and myrtle plentifully strewed over the top of each. I am now eating the corn, and the weevil are no where to be found.

This last *accidental* experiment is more convincing than either of the others; here the two bins were free from weevil, and the corn which was separated from them, only by a loose board partition, was filled, and I have little doubt, would have been rendered unfit for use before the summer was over. Perhaps, Mr. Editor, in giving you and your readers the information detailed in this paper, I have been "carrying coals to Newcastle;" if so, light your spirit lamp with it, and I shall be satisfied, as my only object is to do good, and not to see myself in print.

With my best wishes for your restoration to health, and success in your pursuits, I remain your friend, Z.—[Southern Agriculturist.]

CULTURE OF POTATOES AND INDIAN CORN.—On passing a well cultivated farm two days ago, I observed in a potato field that the earth had been drawn up into hills nearly one foot high and somewhat conical, closely round the stems; and I doubted if that labor had been well directed. It is now twenty-five years since I had a patch of potatoes which we had commenced hoeing in dry weather. A neighbor mildly remonstrated with me against our proceedings, and said that *potatoes hoed in dry weather generally yield a poor crop.* I had not duly considered the subject, but I took his advice, waiting until we had a rain before we hoed the remainder, and the difference in the produce of the two parcels was as great as he had predicted,—certainly more than three to one in favor of hoeing when the ground was well moistened. It was not so wet however as to be muddy. The cause of this result was that the leaves of the potato shed the rain, and turn it from the hill, perhaps more than any other vegetable which we cultivate; and if the hills be made *high* and *sharp*, and once become dry, a moderate shower of rain will rarely penetrate to the roots.

The potato, to yield abundantly, requires a plentiful supply of moisture, although it is very impatient of stagnant water; and some may wonder why its leaves should turn off the very thing for which its roots are languishing. It should be remembered, however, that the potato grows indigenously in a very different and distant country from ours. In a state of nature, no hills are piled up round its stems; and in our culture, we ought to consider the constitution of the plant, and remedy as far as practicable the defects of our climate. If it is cultivated in HILLS, these ought to be neither high nor sharp, but depressed on the summit; or rather shaped like a basin, to catch the rain as it falls, and turn it towards the roots. If it is cultivated in ROWS with the plough, the same object should be borne in mind. I have seen a plough with an additional piece of wood on the mold-board, so as to raise the earth high round the stems; and when the work was finished, the ridges were sharp like the roof of a house, and turned off the water nearly as well. The appearance of a field soon after the operation was fine; but the crop, as we might expect, was very light.

Indian corn, on the contrary, will bear hilling much better; though I think this business is often overdone. It is very evident that all the loose earth should not be scraped from the furrows between the rows, as I have sometimes seen it; for in heavy loams, the hard ground, if left uncovered, is sure to crack in dry weather, and *let out the moisture* from below. I shall recur however to my first remark on this plant. The leaves of Indian corn are so constructed as to turn most of the rain that falls on them down to the roots. After a short but dashing shower, I have soon after found the other parts of the field comparatively dry, while it seemed as if a basin of water had been poured into each hill.—[Gen. Farmer.]

If the words 'hilled up' were substituted for 'hoed' in the sentence in Italics, we think it would be more correct.—[ED. N. Y. F.]

NEW BREAD.—A Parisian chemist has established a bakehouse for bread made from potatoes, which is animalized by the addition of the gelatine made from bones. In this way, a food which is said to be equally pleasant and more nutritious than wheaten bread, is obtained at half the expense of the latter. A large quantity of biscuits for the use of the African expedition has been made upon this plan. In a time of scarcity of corn the discovery will prove a great blessing.

TO KEEP PLUMS AND PEACHES FRESH THRO' THE YEAR.—Beat well up together equal quantities of honey and spring water; pour the mixture into an earthen vessel; put in the fruits all freshly gathered, and cover them up quite close. When any of the fruit is taken out, wash it in cold water, and it will be fit for immediate use.

NEW-YORK AMERICAN.

AUGUST 9—16, 1834.

LITERARY NOTICES.

COMPLETE WORKS OF SIR WALTER SCOTT—Parts 33 and 34—Poetry. Conner & Cooke.—The early reputation which Scott won by his Minstrelsy of the Scottish Border, of which these two numbers consist, was so completely swallowed up in the renown of the author of Waverley, or rather first in that of the Lay of the Last Minstrel, that these earlier efforts of his genius and his industry seem almost to have been forgotten. The excellent edition of his works, by Messrs. Conner & Cooke, place his admirable collection of ballads afresh before us, and we are induced to make a few extracts:

Barthram's Dirge.—The following beautiful fragment was taken down by Mr. Surtees, from the recitation of Ann Douglass, an old woman who weeded in his garden. It is imperfect, and the words within brackets were inserted by my correspondent, to supply such stanzas as the chantress's memory left defective. The hero of the ditty, if the reciter be correct, was shot to death by nine brothers, whose sisters he had seduced, but was afterwards buried, at her request, near their usual place of meeting; which may account for his being laid, not in holy ground, but beside the burn. The name of Barthram, or Bertram, would argue a Northumbrian origin, and there is, or was, a Headless Cross, among many so named, near Elsdon in Northumberland. But the mention of the Nine-Stane Burn, and Nine-Stane Rig, seems to refer to those places in the vicinity of Hermitage Castle, which is countenanced by the mentioning our Lady's Chapel. Perhaps the hero may have been an Englishman, and the lady a native of Scotland, which renders the catastrophe even more probable. The style of the ballad is rather Scottish than Northumbrian. They certainly did bury in former days near the Nine-Stane Burn; for the Editor remembers finding a small monumental cross, with initials, lying among the heather. It was so small, that, with the assistance of another gentleman, he easily placed it upright.

BARTHRAM'S DIRGE.

They shot him dead at the Nine-Stone Rig,
Beside the Headless Cross,
And they left him lying in his blood,
Upon the moor and more.
* * * * * *
They made a bier of the broken bough,
The sauch and the aspin gray,
And they bore him to the Lady Chapel,
And waked him there all day.

A lady came to that lonely bower,
And threw her robes aside,
She tore her ling [long] yellow hair,
And knelt at Barthram's side.

She bathed him in the Lady-Well,
His wounds so deep and sair,
And she plaited a garland for his breast,
And a garland for his hair.

They rowed him in a lily sheet,
And bare him to his earth,
[And the Gray Friars sung the dead man's mass,
As they pass'd the Chapel Garth.]

They buried him at [the mirk] midnight,
[When the dew fell cold and still,
When the aspen gray forgot to play,
And the mist clung to the hill.]

They dug his grave but a bare foot deep,
By the edge of the Ninestone Burn,
And they covered him [o'er with the heather flower,]
The moss and the [Lady] fern.

A Gray Friar staid upon the grave,
And sang till the morning tide,
And a friar shall sing for Barthram's soul,
While the headless Cross shall bide.

The manner in which the following ballad was spoken of in the Edinburgh Review, with the beautiful stanzas of Wordsworth on the same subject, is familiar to our readers; but it will bear repetition:

Fair Helen of Kirconnell.—The following very popular ballad has been handed down by tradition in its present imperfect state. The affecting incident, on which it is founded, is well known. A lady of the name of Helen Irving, or Bell, (for this is disputed by the two clans,) daughter of the Laird of Kirconnell, in Dumfriesshire, and celebrated for her beauty, was beloved by two gentlemen in the neigborhood. The name of the favored suitor was Adam Fleming of Kirkpatrick; that of the other has escaped tradition: though it has been alleged, that he was a Bell, of Blacket House. The addresses of the latter were however, favored by the friends of the lady, and the lovers were therefore obliged to meet in secret, and by night in the churchyard of Kirconnell, a romantic spot, almost surrounded by the river Kirtle. During one of these private interviews, the jealous and disapised lover suddenly appeared on the opposite bank of the stream and, levelled his carbine at the breast of his rival. Helen threw herself before her lover, received in her bosom the bullet, and died in his arms. A desperate and mortal combat ensued between Fleming and the murderer, in which the latter was cut to pieces. Other accounts say, that Fleming pursued his enemy to Spain, and slew him in the streets of Madrid.

The ballad, as now published, consists of two parts. The first seems to be an address, either by Fleming or his rival, to the lady; if, indeed it constituted any portion of the original poem. For the Editor cannot help suspecting, that these verses have been the production of a different and inferior bard, and only adaped to the original measure and tune.—But this suspicion being unwarranted by any copy he has been able to procure, he does not venture to do more than intimate his own opinion. The second part, by far the most beautiful, and which is unquestionably original, forms the lament of Fleming over the grave of fair Helen.

The ballad is here given, without alteration or improvement, from the most accurate copy which could be recovered. The fate of Helen has not however, remained unsung by modern bards. A lament of great poetical merit, by the learned historian, Mr. Pinkerton, with several other poems on this subject, have been printed in various forms.

The grave of the lovers is yet shown in the churchyard of Kirconnell, near Springkell. Upon the tombstone can still be read—*Hic jacet Adamus Fleming;* a cross and sword are sculptured on the stone. The former is called by the country people, the gun with which Helen was murdered; and the latter, the avenging sword of her lover. *Sit illis terra levis!* A heap of stones is raised on the spot where the murder was committed; a token of abhorrence common to most nations.

FAIR HELEN.—PART FIRST.

O! SWEETEST sweet, and fairest fair,
Of birth and worth beyond compare,
Thou art the causer of my care,
Since first I loved thee.

Yet God hath given to me a mind,
The which to thee shall prove as kind
As any one that thou shalt find,
Of high or low degree.

The shallowest water makes maist din,
The deadest pool, the deepest linn;
The richest man least truth within,
Though he preferred be.

Yet, nevertheless, I am content,
And never a whit my love repent,
But think the time was a' weel spent,
Though I disdained be.

O! Helen sweet, and maist complete,
My captive spirit's at thy feet!
Thinks thou still fit thus for to treat
Thy captive cruelly?

O! Helen brave! but this I crave,
Of thy poor slave some pity have,
And do him save that's near his grave,
And dies for love of thee.

PART SECOND.

I WISH I were where Helen lies,
Night and day on me she cries;
O that I were where Helen lies,
On fair Kirconnell Lee!

Curst be the heart that thought the thought,
And curst the hand that fired the shot,
When in my arms burd* Helen dropt,
And died to succour me!

O think na ye my heart was sair,
When my love dropt down and spak nae mair,
There did she swoon wi' meikle care,
On fair Kirconnell Lee.

As I went down the water side,
None but my foe to be my guide,
None but my foe to be my guide,
On fair Kirconnell Lee;

I lighted down my sword to draw,
I hacked him in pieces sma',
I hacked him in pieces sma',
For her sake that died for me.

O Helen fair, beyond compare!
I'll make a garland of thy hair,
Shall bind my heart for ever mair,
Until the day I die.

Oh that I were where Helen lies!
Night and day on me she cries;
Out of my bed she bids me rise,
Says, "Haste and come to me!"

O Helen fair! O Helen chaste!
If I were with thee, I were blest,
Where thou lies low, and takes thy rest
On fair Kirconnell Lee.

I wish my grave were growing green,
A winding-sheet drawn over my een,
And I in Helen's arms lying,
On fair Kirconnell Lee.

I wish I were where Helen lies!
Night and day on me she cries;
And I am weary of the skies,
For her sake that died for me.

* *burd Helen*—Maid Helen.

THE AMERICAN MONTHLY MAGAZINE FOR AUGUST sustains the reputation which this periodical has long been gradually but deservedly establishing for itself. It has now, without the least aid from puffing, established itself in the favor and confidence of the reading public, winning its way solely by its own merits. The present number is enriched by one of those articles (we believe we may say from the pen of the Editor) to which we have more than once called attention, entitled, "Passages from the Life of Mary Queen of Scots." The portion we have selected for extracting, commences with a beautiful tribute to Maternal Love; in which the writer paints with considerable feeling the purest, the truest, the holiest emotions that ever swell a human bosom; and concludes with an epigrammatic censure of Queen Elizabeth, which will be responded to by every one who justly appreciates the character of that sigularly gifted but vain and hollow-hearted woman. It is as follows: †

There is, perhaps, no aspect of the mind—many-colored and various as are the points of view in which it may be considered—more singular than that, wherein it seems to collect itself, as it were, and to concentrate, into a solitary moment of time, all the the thousand emotions, whether of bliss or agony, which it may have endured in disconnected succession through a long term of years. That moments of this description are neither of rare occurrence, nor confined to individuals of any peculiar character, must be evident to all who have observed, even with common interest, that most wonderful of created essences, the mind of man. To those, however, who look somewhat beyond the surface of things, it will become manifest,—without becoming, on that account, one iota the less marvellous,—that the mind is more apt to return, and to live over again the events of former days, abstracting itself wholly, and becoming totally forgetful of the present in its contemplation of the past, at periods of acute feeling, or of engrossing excitement; periods in which it would be naturally expected that apprehension, anxiety, or sorrow, would seize all the faculties of thought with a grasp so paralizing, as to rivet them immoveably to the consideration of their own immediate destiny.

It was in a state of mind not wholly dissimilar to that which we have endeavored to shadow forth, that Mary, in the solitude of her last earthly night, diverting her attention entirely from the terrible shock she was about to undergo on the morrow, thought only of her native land, still dear, though still ungrateful, a prey to the fierce contentions of her own factious offspring; of her son, torn at the earliest dawn of his affections from the arms of a mother, nurtured among those who would teach him to eradicate every warmer recollection; to pluck forth, as if it were an offending eye, every lingering tenderness for that being, who, amidst all her sins and all her sorrows, had never ceased to love him with a perfect and entire love. There is, in truth, a something more evidently divine, partaking more nearly of that, which we believe to be the very essence of divinity, in a mother's love, than in any other pang or passion; for every passion, how sweet soever it may be, is yet a pang,—of the human soul. All other love is liable to diminution, to change, to extinction; all other love may be alienated by the neglect, chilled by the coldness, frozen to the core by the worthlessness, of the object once beloved.

All other affections are influenced by a thousand trivial circumstances of time and place; absence may weaken their influence, time obscure their vividness, and above all, custom may rob them of their value; over all other love, the estimation of the world exercises an almost boundless sway; we honor, in our heart of hearts, those whom the world has dignified with its approval, and too often, if that approval be unmeritedly withdrawn, we too insensibly desist from that admiration, which must be a component part in every warmer sentiment. But on the love of a mother,—commencing as it does, before the object of her solicitude possesses form or being; springing from agony and sorrow; ripening in anxiety and care; and reaping too often the bitter harvest of ingratitude,—all external influences, all incidental causes, are powerless and vain. Time—but excites her admiration, but increases her solicitude, but redoubles her affections. Absence—but causes her to dwell with a more engrossing memory on him, from whom her heart is never absent. Custom—but hallows the sentiments, to which nature has given birth. Neglect and coldness—but cause her to strain every nerve to merit more and more the poor return of filial love, the solitary aim of her existence, so heartlessly denied her. Nay, worthlessness itself—but binds

her more closely to him, whom the false and fickle world has cast aside, to find a refuge in the only bosom, which will not perceive his errors, or credit his utter destitution.

Thus, *thus* it was with Mary!—She knew that the child of her affections regarded those affections as vile and worthless weeds!—She knew that he was selfish, vain, and heartless!—She knew that, when she had toiled through many a summer's day and many a wintry night in framing for her beloved boy a garment, embroidered with the best of her poor skill, decked with every gem that yet remained to her of all her former pomp,—that garment, the labor and at the same time a solace to her imprisoned weariness—that garment, which a son, possessed even of one spark of human feeling, would have cherished above the value of man's loyalty, or woman's love,—would have prized beyond throne or principality,—would have worshipped, as second only to the God of his adoration,—that garment, on a miserable pretext of court etiquette, was returned to the heart broken captive, as a mere gift of a ceremony, a thing under any circumstances valueless, but now impertinent and calling for contempt instead of gratitude!—She knew that a single embassy—a single word from that child, whom she still adored,—if conveyed to her relentless persecutor in the strong language of sincerity and zeal, if borne not by a fawning courtier, but by one of those high spirits which Scotland has found ever ready at her need, if enforced by instant threats of war, would have broken her fetters in a moment, and conveyed her from the dungeons of Fotheringay to the courts of Holyrood!—All this she knew, yet her heart would not know it. When all Europe rang with curses on the unnatural vacillation of that son; when every Scottish heart, whatever might be its policy or its party, despised this abject cringing; when Elizabeth herself, while she flattered his vanity, and affected to honor and esteem his virtue, scoffed in her royal privacy at the tool she designed to use in public; Mary alone,—Mary the only sufferer, the only victim of his baseness,—still clung to the imagination of his probity, still adored the child, who was driving her out, as the scape-goat of the Jews, to expiate the sins of himself and his people, by her own destruction. But it was not on James alone that her wayward memory was fixed. At a time when any soul less dauntless, any spirit less exalted, would have shrunk beneath its load of sorrows, Mary had a fond regret, a tear of sorow, a sigh of sincere gratitude, for every gallant life that had devoted itself to ward from her that fate, which their united loyalty had failed only, to defer, not to avert. Chastelar passed before her with his tones of sweetest melancholy, and that unutterable love, which made him invoke blessings upon her, who doomed him to the block—and Darnley, as he had seemed in the few short hours, when he had been, when he had deserved to be, the idol of her heart—and Bothwell, the bold, the eloquent, the glorious, but the guilty Bothwell—her ruin and her betrayer—Douglass, the noble, hapless Douglass, he who had riven the bolts of Lochleven, and sent her forth to a short freedom and a worse captivity—Huntley, and Hamilton and Seyton, and Kirkaldy the most formidable of her foes, till he became the firmest of her friends, all passed in sad review before the eyes of her entranced imagination.

Thus it was that the last Queen of Scotland passed the latest night of her existence. With no consciousness of time, with no care for the present, no apprehension of the future, she had paced the narrow floor of her apartment during the still hours of midnight. Unperceived by her had the stars paled, and then banished from the brightening firmament; unseen had the faint dappling of the east grown into the cold clear light of a wintry morning; unheard had the castle clock sent forth its giant echoes hour after hour, to be heard by every watcher over leagues of field and forest. Another sound rose heavily, and at once she was collected—time, place, and circumstances, flashed fully on her mind; she was prepared to meet them. It was the roar of the morning culverin, and scarcely had its deafening voice swept over, before a single bell, hoarse, slow, and solemn, pealed minute after minute, the signal of her approaching dissolution.

Calmly, as if she were about to prepare for some gay festival, she turned to the apartment where her ladies, overdone by wo and watching, yet slumbered, forgetful of the dread occasion.

"Arise"—she said in sweet low notes, "arise, my girls, and do your last of earthly duties to the mistress ye have served so well. Nay! start not up so wildly; nor blush, that ye have slept while we were watching. Dear girls, the time hath come—the time for which my soul has so long thirsted.—Array me then, array me as to a banquet, a glorious banquet of immortality! See"—she continued scattering her long locks over her shoulders—"see—they were bright of yore, as the last sunbeam of a summer day, yet I am prouder of them now, with their long streaks of untimely snow—for now they tell a tale of sorrows borne as it becomes a queen to bear them! Braid them with all your skill, and place yon pearls around my velvet head-gear. We will go forth to die, clad as a bride, and now methinks the Queen of France and Scotland owns but a single robe of rich device—bring forth our royal train and broidered farthingale—it suits us not to fall with our limbs clad in the garb of mourning, when heaven knows the heart is clothed in gladness,"—Tearless, while all around were drowned in lamentations, she strove to cheer them to the performance of this their last sad office, not with the commonplace assurances, the miserable resources of earthly consolation, much less with aught of heartless levity, or of that unfeeling parade which has so oft adorned the scaffold with a jest, and concealed the anxiety of a heart ill at ease beneath the semblance of ill-timed merriment; but by suffering them to read her inmost soul, by showing them the true position of her existence, by pointing out to them the actual hardships of body, and the still deeper humiliations of the soul, from which the door of her escape was even now unclosing; and if she was not wholly successful, she yet prevailed upon them to restrain the bitterness of their grief, and, if sorrow they must, at least to sorrow in secrecy and silence. Scarcely had she completed her attire, and tasted of the consecrated wafer, long ago procured from the holy Pius, and treasured for this extremity, when the tread of many feet, and a slight clash of weapons in the ante-chamber, announced that the hour had arrived.

Once and again, ere she gave the signal to unclose the door, she embraced each one of her attendants—"Dear, faithful friends, adieu, adieu"—she said—"forever: and now remember!—remember the last words of Mary. Weep not for me, and, if ye love me, shake not my steadfastness, which, thanks to him who is the Father and the Friend of the afflicted, the fear of death cannot shake, by useless lamentation or abject terror. We would die as a martyr, cheerfully—as a queen, nobly! Fare ye well—and remember!"—With an air of royal dignity she seated herself, and with her maidens standing around her throne, she bore the mien of a high potentate, awaiting the arrival of some proud legation, rather than of a captive expecting her summons to the block—"And now"—she said, as she arranged her draperies with dignified serenity—"admit their envoy!"

The doors were instantly thrown open as she spoke—the sheriff uttered his customary summons, and without a shudder she arose. "Lead on,"—she said—"we follow thee more joyously than thou, methinks, can marshal us! Sir Amias Paulet, lend us thine arm; it fits us not, that we proceed even to the death, without some show of courtesy. Maidens—bear up our train—and, now sir, we are ready."

But a heavier trial than the axe awaited the unhappy sovereign; for as she set her foot on the first step of the stairs, Melvil, her faithful steward, flung himself at her feet with almost girlish wailings.—Friendly and familiarly she raised him from the ground. "Nay, sorrow not for me," she said, "true friend, subject for sorrow there is none, unless thou grievest that Mary is set free, that for the captive's weeds she shall put on a robe of immortality, and for a crown of earthly misery a circlet of beatitude!"

"Alas! alas!—God grant that I may die, rather than look upon the damned deed."

"Nay, live good Melvil, for my sake, live! Commend me to my son, and say to him, Mary's last thoughts on earth were due to France and Scotland—her last but these to him! Say that she died, unshaken in her faith to God, unswerving in her courage, and confident in her reward. Farewell, true servant—take from the lips of Mary the last kiss that mortal e'er may taste, and fare the well forever!"—

At this moment the Earl of Kent stept forth, and roughly bade her dismiss her women also—"for the present matter lacked other ministers than such as these." For a moment she condescended to plead that they might be suffered to attend her to the last, but when she was again refused, her ancient spirit flashed out in every tone, as she cried trumpet-like and clear, "Proud lord, beware!—I too am cousin to your queen—I too am sprung from your proud blood of Tudor—I too am an anointed queen. I say thou shalt obey, and these *shall* follow their mistress to the death—or by foul violence shalt thou force me thither—Beware! Beware, I say, how thou dare do me this dishonor."

Her words prevailed—without a shudder she descended—entered the fatal hall,—looked with an air of smiling condescension, an air almost of pity, on the spectators crowded almost to suffocation, and mounting the scaffold stood in proud and abstracted unconcern, while, in the measured sounds of a proclamation, the warrant for her death was read beside her elbow. The bishop of Peterborough then drew near, and in a loud voice and inflated style, harrassed her ears with an oration, which, whatever might have been its merits, was at that moment but a barbarous and needless outrage. "Trouble not yourself," she broke in at length, disgusted with his intemperate eloquence. "trouble not yourself any more about this matter; for I was born in this religion, I have lived in this religion, and in this religion I am resolved to die." Turning resolutely aside, as if resolved to hear no further, she knelt apart, fervently prayed, and kissed again and again the sculptured emblem which she bore, of Him who died to save. As she arose from her orisons, the Earl of Kent, with heartless cruelty, her constant and relentless persecutor, burst into low revilings against "that popish trumpery" which she adored. "Suffer me now," she said, gazing on him with an expression of beautiful resignation that might have disarmed the malice of a fiend, "suffer me now to depart in peace. I have come here, not to dispute on points of doctrine, but to die!" Without another word she began to disrobe herself, but once, as her maidens hung weeping about her person, she laid her finger on her lips, and repeated emphatically the word, "remember!" And once again, as the executioner would have lent his aid to remove her upper garments; "good friend," she said, with a smile of ineffable sweetness, "we will dispense with thine assistance. The Queen of Scotland is not wont to be disrobed before so many eyes, nor yet by valets, such as thou!" All was now ready—the lovely neck was bared; the wretch who was to perform the deed of blood, grasping the fatal axe; and the fierce Earl of Kent beating the ground with his heel, in savage eagerness! Without a sigh she knelt, without a sign of trepidation, a quicker heave of her bosom, or a brighter flush of her brow, she laid down her innocent head; and, without a struggle or convulsion of her limbs, as the axe flashed, and the life-blood spouted into the very countenance of her slayer, did her spirit pass away. A general burst of lamentation broke the silence, but, amidst that burst, the heavy stride of Kent was heard, as he sprang upon the scaffold, and raised the ghastly visage, the eyes yet twinkling, and the lips quivering in the death struggle! A single voice, the voice of the zealot bishop, cried aloud, "Thus perish all the foes of Queen Elizabeth," but e'er the response had passed the teeth of Kent, a wilder cry rang through the hall. The savage yell of a small greyhound, the fond companion of the murdered queen's captivity! Bursting from the attendants who vainly strove to hold her back, she dashed, with a quick, wild cry, full at the throat of the astonished earl; but e'er he could move a limb, the peril, if peril there were, was past. The spirit had been too mighty for the little frame. The energies of the faithful brute were exhausted, its heart broken, in that death spring. It struck the headless body of its mistress as it fell, and, in an agony of tenderness, perished while licking the hand that had fed and cherished it so long. Wonderful! that when all men had deserted her, a brute should be found constant in its pure allegiance! and yet more wonderful, that the same blow should have completed the destiny of two rival sovereigns! And yet, so it was! The same axe gave the death-blow to the body of the Scottish and to the *fame* of the English queen, THE SAME STROKE COMPLETED THE SORROWS OF MARY AND THE INFAMY OF ELIZABETH. H.

THE FREE CITIES OF FLANDERS is the title of an article in the last number of the North American Review, which affords one of the most concise accounts that we remember to have met with, of the deeds of those bold Burghers, who so long kept the flag of freedom flying when the pennons of all Europe's chivalry were rustling against it. The restrictive limits of such a paper, however, has prevented its author from expatiating as he might upon the causes that kept alive the spirit of liberty in those commercial towns, when its principles seemed wholly misunderstood throughout the rest of Christendom. The gradual growth of the *Tiers Etat* is indeed the

subject of tedious dissertation with so many historians, that a periodical writer may readily be forgiven for passing it over with a few touches; but it has sometimes occurred to us, when reflecting upon the manner in which the present degrees of liberty enjoyed in various parts of the world have been acquired from those who at one time enjoyed the complete monopoly of power, that some useful lessons might be deduced for our people at home, from the events of former ages. And first, we may remark that the extension of commerce, and the rise and influence of the mercantile interest, have in all States anticipated, or been coeval with, the growth of their liberties; while those liberties again have been most stoutly maintained, at least, in the free cities of Europe, by the tradesmen and mechanics. It was these last especially, who, under their respective leaders, succeeded so long in maintaining the proud city of Ghent—the Milan of Northern Europe, as Guicciardini terms it—against the various feudal powers that successively assailed her liberties, until the paricidal arm of Charles V. crushed them at a blow, and robbed the place of its birth of a prosperity which she has never since recovered.

One of the heaviest charges to be brought against writers of fiction, in almost every age, is that blind leaning to power, which, from the days of Virgil and Horace, to those of Scott and Southey, have placed them upon the tory side of politics, and, eliciting praises direct or implied, for those who filled the chair of patronage, left only sneers and contumely for "the base mechanic," who battled to the last for the cause of liberty. The halo that has been thrown by their magic pens around the vaunted deeds of Chivalry, has stolen its proper light from a thousand acts of heroism, that might have illumined names now lost for ever to the world; that might have left lessons of self sacrificing patriotism for mankind that would have kept truth much longer upon earth. In every country, where liberty has been long maintained, it is in the middle classes that its principles have most resided, and, however the poet and novelist may sneer at "burley burghers" and "greasy citizens," it is by the inhabitants of cities, that its holy fires have been watched with the most religious jealousy, and shielded with the most invincible spirit. †

Railroad and Canal Map: *D. K. Minor*, 35 Wall street.—This is a convenient *pocket* map of the United States, on a scale of about 40 miles to the inch, upon which is laid down all the principal lakes, rivers, cities, towns and villages—together with the Canals and Railroads made, making, chartered, and many of those in contemplation, *not* at present chartered, with a concise description of, or reference to, each—showing not only their present location, but also the probable connection hereafter of those which are now viewed only as distinct works. It refers particularly to the subject of a Steamboat Canal from the Hudson to Lake Ontario—from Ontario to Erie—and from Erie through the *Miami* and *Wabash* rivers, or from Chicago to the Illinois and Mississippi rivers, by which enterprize would be opened an inland communication with New Orleans of more than 3,500 miles.

Two days later from London.—London dates to July 2d, have been received at Boston, via Halifax.

Mr. Wyer, bearer of the Treaty of Commerce agreed upon between the United States and Spain, left Paris June 30, for Madrid.

All was tranquil at Madrid 21st June. The Queen reviewed the army of Rodil, from Portugal, and was enthusiastically received by the troops. A fresh conspiracy has been discovered in Bulgari.

Forty men and one woman were lost from the swamping of a boat in the river Feale.

Effects of the late Riots in France.—The Court of Peers have issued upwards of four hundred warrants of arrest, of search, and rogatory commissions. The number arrested in Paris since April, exceeds 960; at Lyons the number is upwards of 1200. All the prisons are full—one of which contains 460.

Cholera in Dublin.—The Cholera has made its appearance again in Dublin and its vicinity, with scarcely any abatement of the virulence which marked its approach. In the neighborhood of Kingston and vicinity, (says a letter writer,) numerous fatal cases have occurred; and although no public mention has been made of Cholera in this city, I have heard from good authority that 40 deaths occurred in one parish on the north side of the river last week.

London, July 2.—Letters from the Mediterranean state the probability of a rupture between the Porte and the Pacha in Egypt. The Sultan persists in demanding two years arrears of tribute from Mehemit Ali, when he is not disposed to pay, nor has he yet evacuated the districts of Oursa and Raica, as required by the Porte. Should the war be renewed, France and England will have a difficult part to act, but it is believed, that on the event of another Russian army entering Constantinople, the combines fleet, now thirteen sail of the line, and numerous large frigates, will try the passage of the Dardanelles, and thus put to issue the late secret treaty between the Porte and Russia.

Later from England.—By the President, from London, papers of that city of the 4th ult. are received. We are indebted to the Commercial Advertiser for the use of them. We do not notice any thing of much interest.

The French Chamber of Deputies was convened for the 31st July. It was supposed the King, after opening the session in person, would make a tour through the south of France.

According to the *Temps*, the Duke *Decazes*, with a vice-regal salary, was appointed Governor of Algiers. The ministerial papers make no allusion to such an appointment.

The Editor of the Morning Post—committed by the House of Lords for a breach of privilege in assailing the Lord Chancellor—had been reprimanded and discharged, after an expression on his part of contrition for the offence.

The Irish Coercion Bill.—After several fruitless attempts to negotiate with O'Connell and his friends, for a renewal of the Irish Coercion Bill, with essential modifications, on the 4th of July, Earl Grey brought forward the law about to expire, omitting only the Court Marshal clause. A sharp incidental skirmish took place in the Commons, upon this subject, on the 3d, between Mr. Littleton, the new Irish Secretary, and Mr. O'Connell.

The London Morning Herald, of July 2d, contains the following article from its correspondent at Madrid.

We confess we see with pleasure the interest thus manifested by our Government, in the welfare and prosperity of the other peoples of this Continent. Placed by our position, resources, and early acquired liberties, at the head of American nations, it is fit, wheresoever it can, as in this instance, be done with perfect propriety, that the influence of these States should be exerted for the common benefit of our Continent.

Prospective Recognition of the South American Colonies.

Madrid, June 18.—Being of opinion that the recognition of the South American States and the melioration of the Spanish commercial policy were questions of paramount importance, and much more valuable to Great Britain than those other points to which our attention has been so exclusively directed, I have watched since I came here the steps of the present ministry on the subject, and I have now succeeded in obtaining two remarkable documents, translations of which I immediately subjoin, through the the medium of a useful agent, who occasionally supplies me with papers from the public offices. The first is a copy of a note, addressed on the 12th February, 1834, by the Minister of the United States to the Foreign Office, and the second is the reply of M. Martinez de la Rosa, dated the 12th of this month. From the one you will learn how wisely the American government has been pursuing an object so essential to its commerce, and how favorably it must appear before the South American States as the power to whose exertions they are indebted for the first symptoms of reviving affection on the part of the mother country; and from the other you will infer that the willingness to treat with the South American commissioners is only a prelude to the grand act of a recognition, which must take place as soon as the terms are arranged. The American's Minister's note is as follows:

"Legation of the United States of America.
Madrid, Feb. 12, 1834.

"In pursuance of instructions from the President of the United States, I had the honor, on the 6th of May, 1831, to address a note to his Excellency Don Manuel Gonzales Salmon, then his Majesty's Principal Secretary of State, stating that the anxiety which the government of the United States had long felt, and which theretofore had been fully made known to his Majesty's government, that an amicable and satisfactory settlement between Spain and her former colonies, the new American States, should take place, had arisen as well from a regard to the principles of humanity and the interests of the party concerned, especially that of Spain, as from the expectations of benefit to the United States.

"I added that the government of the United States, without intending or wishing to depart from its settled policy of not interfering with the affairs of other nations, except by friendly advice in cases in which it might be thought suitable, felt itself authorized by the friendly relations existing between the United States and Spain, and by the circumstances of the case, to make another appeal to his Majesty on a question of so great and so general an interest, and that in doing so it indulged a strong hope that his Majesty would not any longer refuse to open a negociation with the new States, but that, on a full and deliberate review of the matter, he would be convinced that, independently of the satisfaction which such an event would afford to most if not to all the nations with which Spain had friendly intercourse, a recognition by his Majesty of the independence of those States, upon just and proper terms, would contribute both to the honor and interest of Spain. And I concluded by suggesting some considerations in relation to the remaining possessions of Spain in America, which I hoped would not have been disregarded.

"To the note in question Mr. Salmon favored me with an answer, under date of the 11th June of the same year, by which I was informed that the King received my communication as a proof of the strong interest felt by my government in favor of his Majesty, and that as the question was fully present to his Royal mind, he would take it into consideration when the case might be favorable, in such a manner as might be most conformable to the interest of his crown, and that then the friendly communication made by me would not be forgotten.

"The President of the United States, having deemed the accession of Donna Isabel the Second to the throne of Spain, under the regency of her august mother, a favorable occasion for the renewal of his efforts, has directed me to lose no time in addressing her Majesty's government on the subject.

"Without entering anew upon the field of argument which presents itself, it is conceived by the President that all the considerations which have heretofore existed, and been pressed upon the government of Spain, in favor of a conclusion of this matter upon the basis of the recognition by Spain of the independence of the States above mentioned, not only continue to exist, but have been greatly strengthened by time and circumstances, and he cannot but persuade himself that the case will be received in its true light by the liberal and enlightened government of Donna Isabel the Second; and that one of the first great acts from which it may be destined to derive lasting distinction and applause will be a prompt and just arrangement of the American question.

"It only remains for me to add that the government of the United States is ready and desirous, as it has ever been, to do all in its power for the mutual conciliation of the parties concerned, and to facilitate the final conclusion of their disputes upon terms alike honorable and advantageous to all sides.

I have the honor, &c.

"(Signed) J. P. Van Ness.

The following is a translation of the reply of M. Martinez de la Rosa.

"*At the Palace, June* 12.

"The multiplicity of business which the Department of State has been charged with since her Majesty the Queen Regent was pleased to intrust me with that office, has prevented my giving an earlier reply to the several applications which your Excellency, in pursuance of instructions from your government, has made to me respecting the importance and expediency, to use your Excellency's own words, 'of a prompt and just arrangement of the American question.'

"Her Majesty in her wisdom cannot but be aware of the advantages of being relieved from an uncertain

position, and of adopting a definitive decision in regard to the vast territories alluded to; and for my part, if my humble opinion be considered of any weight in determining the measures of her Majesty, I can assure your Excellency that as soon as the late King Don Ferdinand did me the honor to appoint me to this department, ten years ago, I called the attention of the government to this interesting question, from the persuasion I was under of the injury and loss which would accrue from any delay in the settlement of it, and because it appeared to me quite practicable, at least was then my opinion, as it is now, to consolidate the interests of our brethren in South America with the interests of the Peninsula, by the adoption of a basis reciprocally great and advantageous.

"For the accomplishment of this object his Majesty's government despatched at that period several special commissioners, who were furnished with the necessary instructions, and were directed to announce a cessation of hostilities, and to propose, as a preliminary step towards the removal of the political difficulties, the re-establishment of the commercial relations of the two countries. The great events which soon after occurred, and which are two well known to require being recorded, prevented the fulfilment of the wish, as then entertained by the Spanish goverment, and this great and interesting question has remained in a state of suspense from that time to the present.

"The decision of it, however, is desired by the Queen Regent, who in the government of this monarchy is guided by principles of a liberal and enlightened policy, and her majesty has accordingly authorized me to communicate to the diplomatic agents of Spain in foreign courts, especially those in Paris and London, the necessary instructions, to the end that if any commissioners present themselves with powers and instructions of a nature to offer to Spain a just and honorable arrangement, they may afford such commissioners all the facilities and guarantees they may desire, with the assurance that they will find her Majesty animated by the most favorable dispositions.

"Her majesty has, at the same time, authorized me to make to your Excellency this frank declaration, in order that you may communicate the same to your government, in return for the wishes expressed by it of an early conclusion of this interesting question; and as her Majesty feels confident, after consulting her personal feelings, without disregarding the suggestions of a sound policy, that nothing would be more easy than to effect a reconciliation of parties who, in all respects, may consider themselves as children of the same family, when once they shall have consented to an interview. Her Majesty entertains the hope that as soon as negociations may be entered upon in a spirit of sincerity and good faith, the object in question, which, as is expressed with much precision in your Excellency's note, is 'a mutual reconciliation and final conclusion of the differences of the parties, advantageous and honorable to all,' will be completely realized.

"Renewing to your Excellency the assurance, &c.
(Signed) "MARTINEZ DE LA ROSA."

These notes must produce a general satisfaction among those who are interested in the South American States; and I am entitled to assure them from the verbal communications which have taken place in the Foreign Office, as well as from the written document, that no impediment now remains as to the recognition; and the Spanish government is neither more nor less seeking but to make the best bargain with her revolted children, and get the best price she can for the admission of their independence.—The conditions with regard to the commissioners sent from South America are to be taken as so many words which mean nothing; and it is intended that no difficulties shall be put in the way of coming to a proper understanding.

LATER FROM BELGIUM.—Captain Thatcher, of the ship Warsaw, who arrived yesterday, from Antwerp, whence she sailed on the 5th July, has kindly favored us with a file of Antwerp papers to the 3d of that month. The following are translations:

ANTWERP, 3d JULY.—The news which reaches us from all parts of Flanders encourages us to believe that the crops this year of all kinds of grain will be unusually abundant.

ROME, JUNE 14.—In the consistory yesterday the question of Portugal was seriously debated, and an excommunication will probably be issued against Don Pedro. The measure he has taken of confiscating all ecclesiastical property has excited here general indignation. The ecclesiastical establishments are under the sole authority of the Pope, who will never sanction a similar usurpation.

THE HAGUE, 29th JUNE.—We learn that His Majesty has authorized the Minister of the colonies, for the purpose of favoring the commerce of Surinam, to remit the import duties, tonnage money, and other duties to which vessels, coming from the West Indies, and their cargoes, are subject.

King Leopold has issued a decree granting a premium of 35,000 francs to a merchant who has sent the first vessel of the size of 250 tons, to Alexandria, in Egypt, loaded with articles the produce of national industry, and a premium of 3000 francs to another who has sent the first vessel of 60 tons to Algiers.—[Courier.]

SUMMARY.

Intelligence has been received (says the Globe of yesterday) from the President, since he has entered Tennessee, from which we learn that he is well, and sustains the journey astonishingly, considering the extreme heat, and his suffering a sharp bilious attack, which detained him two or three days at Salem, Virginia. The complaint yielded immediately to remedies.

The Hon. Ezekiel F. Chambers, of the United States Senate, has been appointed Chief Judge of the 2nd Judicial Circuit of Maryland, vice Mr. Earle, resigned. This leaves a vacancy in the United States Senate, which will be filled at the regular session of the Legislature. There is no doubt, we presume, that a gentleman of the same politics with himself (Whig) will be elected in his stead.

Mr. SCOTT, editor of the Steubenville (Ohio) Union, was killed last week, near that town, by being thrown from his gig.

BOSTON—*Tuesday*. The British steamboat Cape Breton, which arrived here a few days since from Halifax, cleared yesterday for New York. She has made some pleasant and expeditious trips about ou harbor; and we understand her object has been to show that Sidney coal deserved preference as fuel for steamboats, both for its cheapness and power.

LATE FROM THE SOUTH.—By the steam boat William Gibbons, Capt. Pennoyer, we have received Charleston papers to Saturday evening last, 6th inst. New Orleans dates are to July 31 st. The following are extracts:

Extraordinary Despatch.—We are informed that Goods purchased in New York, on last Saturday forenoon reached Augusta, and were sold on Wednesday Evening.

Steam Boat Burnt.—The schr. Rice Plant, Captain Corson, arived at Charleston, 8th, from Georgetown, having on board, as passengers, Capt. Gardner and crew, ten in number, of the steamboat Walter Raleigh, from Elizabeth City, bound to this port, which vessel was discovered to be on fire in the hold, on Tuesday night last about 8 o'clock. Georgetown Light bearing S. by W, distant 12 miles. In about five minutes after the fire was first observed, the flames had spread so rapidly, that the officers and crew were compelled to abandon the vessel and take to the boat, without saving any thing, with the exception of what they had on; and fortuneately, were picked up by the Rice Plant. The Walter Raleigh was intended to run regularly between this port and Columbia.

The Crops.—The Rice crops (says the Georgetown Union) are said to be very promising. We are sorry to say however, that the Corn crops in the neighboring Districts, from information given us, are not so promising as they were five or six weeks ago.

The Crops in the South and West.—The New Orleans Bulletin of the 31st ult. says, "From every section of the Southern country we have the most cheering accounts of the crops; from present appearance the products of Louisiana, Mississippi, Alabama, Tennessee, South Carolina, Georgia and Florida, will far exceed that of any previous year—the accounts from Texas are also flattering. We may remark that the Corn crops of Louisiana and Mississippi, as far as noticed are not good, while in South Alabama they are better than for many years.

Nassau papers, which have been received at Charleston, state that the 1st instant, was the day on which the law emancipating the slaves in the British Colonies, was to take effect. All was perfectly quiet at Nassau and its vicinity, and the Negroes are stated to be apparently indifferent respecting the change.

The U. S. ship John Adams was about to sail from Norfolk on the 6th instant, with the following officers:

D. Conner, Esq. Commander.
Lieutenants—Wm. H. Gardner, C. Ringgold, Wm. F. Lynch, J. S. Sterrett, C. W. Chauncey.
Purser—D. M. F. Thornton.
Surgeon—B. R. Tinslar.
Assistant do—Lewis B. Hunter.
Sailing Master—Wm. Radford.
Passed Midshipmen—J. M. Gillis, Wm. S. Young, Overton Carr, Jas. M. Lockert, James E. Brown.
Midshipmen—Wm. S. Smith, Johnson B. Carter, W. Callender, Simon F. Blount, M. C. Marrin, B. S. Portor, Wm. C. Brashears, Sam'l Smith, Julius Guthrie.
Captains Clerk—Edward Fitzgerald.
Purser's do—Wm. B. Creecy.
Boatswain—W. Walters.
Gunner—David Taggart.
Sail Maker—Jno. Roser.
Carpenter—Elisha Ellis.
Passenger—Passed Mid. Henry J. Paul.—[Baltimore American.]

James F. Henry, Esq. of New York, is elected Cashier of the Stamford Bank, Con.

SALMON FALLS FACTORY.—We find in the Great Falls Journal the annexed letter, from the Rev. Mr. Caverno, giving the particulars of the recent melancholy fire at Salmon Falls, with more minuteness than any account we have before seen. The editor of the Journal states that the factory was commenced in the spring of 1822, and finished in that and the two subsequent years. It cost, it is said, $300,000. It had sixty broadcloth looms, and manufactured about 300 yards of cloth per day; giving employment to about 200 persons, and support to 500 inhabitants.

Mr. Moody, Sir—Having just returned from Salmon Falls, I hasten to give you a short sketch of the dreadful fire that occurred there yesterday. The large woollen factory with other buildings, among which was a large boarding house, are entirely consumed. One or two other buildings are nearly destroyed or seriously injured. The fire caught in the second story in the large factory in the picking room, where a lad was employed at the time in picking wool. It caught by friction in the gearing of the picker, and instantly communicated itself to the wool, which being in an unctious state, and lightly strown over the floor, communicated itself to every part of the room. In spite of every effort to stop it, it soon found its way to other parts of the building. The alarm was given for the operatives to make their escape, almost at the moment the flame was kindled; but such was its rapidity, that those in the upper story found it hazardous if not entirely impossible to escape by descending the stairs. All was now in confusion. Some leaped from the windows, which it seemed instant death to attempt—some were taken down on ladders; while, awful to relate, two, it is supposed, *perished in the flames!* Several of those who leaped from the windows were seriously injured—one mortally. This was a girl whose name was Mary Nowell. She expired about 11 o'clock in the evening. Three of those most injured have broken bones or are badly mangled, though there is hope as to their recovery. Their names are Mary Jones, Sarah Nowell, and Miriam Thompson. Those who it is supposed perished in the flames, were Harriet Hasty and Lydia Varney. Such a scene as this, it is presumed, never took place in our section of the country. Never did I see such a gloom as hangs over that pleasant little village.

The amount of property destroyed by this conflagration is said to be $180,000. $70,000 or $75,000 insured. I am yours, &c. A. CAVERNO.

August 8, 1834.

[*From the Boston Evening Journal.*]

SEA SERPENT.—We understand that yesterday afternoon about 3 o'clock, the crew and passengers of the Portsmouth Packet, Captain Goodrich, had a distinct view of the Sea Serpent, when within about 8 miles of Nahant. There seemed to be no doubt among 30 credible witnesses of his existence. The Monster was about 20 rods off when first seen; and his head, about the size of a barrel, was elevated 3 or 4 feet above the surface of the water.

He seemed frightened at the noise of the boat, and the exclamations of those on board, and withdrew his head beneath the surface, passing rapidly through the water at the rate of 15 or 20 knots an hour. He appeared to be about one hundred feet in length.

There seemed to be no doubt in the minds of any on board, that this was the veritable monster.

New York Custom House.—The following description of this edifice, now erecting, is from the Journal of Commerce :—

"It is to be 177 feet long, and 89 feet wide, and the form and order of the building to be similar to that of the Parthenon of Athens. It is to stand on a basement story, ascended by 19 steps from Wall street and six steps on Pine street. There are to be eight Grecian Doric columns at each front, and fifteen columns and antæ on each side attached to the walls. There is also to be a second row of six smaller columns back of and parallel with the main front, leaving a space of ten feet between the two rows; and nine feet between the inner row and front wall of the building. Back of the two extreme columns of the inner row there are to be two antæ, and six antæ attached to the wall of the rear front, leaving a space of eight feet and a half between the columns and the antæ. There will thus be twenty four outside columns, five feet eight inches diameter at the bottom, and thirty two feet high, including the capital, and eighteen antæ on the two sides, of the same height, five feet wide, and three feet nine inches projecting from the walls. The six inner columns of the main front will be four feet eight inches diameter at bottom, and the antæ to correspond. The building is to be two stories high, except the great business hall, part of which is to be vaulted as high as the roof will permit, and its centre finished with a dome sixty two feet in diameter. This hall will occupy the centre of the building, and will be one hundred and fifty feet long, leaving a small vestibule at each end to enter from. It is to be seventy seven feet wide in the *centre part*, which is a circle of seventy feet diameter, with the length and breadth of the room extending beyond its circumference to these dimensions; and the four parts so extended beyond the circle are thirty three and a half feet wide, leaving six rooms and three circular stair cases in the four corners, the two largest rooms to be twenty four by twenty one feet each, besides a square stair case in the rear, and three vaults for papers at the two ends of each vestibule. The same divisions of the room is made in the second story. Nearly the same number, shape, and sizes of rooms are had in the basement, as above in the other stories, leaving all the area of the same shape and size as the great hall immediately above it; with the addition of sixteen fluted doric columns to support the vaulting and the pavement under the dome of the great hall.

[*From the Ulster Star.*]

We some weeks since adverted to the new bridge which has recently been erected across the Esopus creek in this village, by Mr. Smith Cram, for Henry Barclay, Esq. This bridge is built upon an entire new construction, and the design is perfectly original with its builder. In order to give the public some idea of the plan upon which this bridge is built, we subjoin the following description :—The bridge is supported by one main arch, which arch extends from shore to shore; it is 250 feet in length, 32 feet high, 28 feet wide at either end, and 20 feet in the centre. The roadway of the bridge, which is suspended from the arch alone by strong rods, is 17 feet above the surface of the water. The arch is formed of timbers 60 or 70 feet in length, and 6 by 12 inches thick, spiked and bolted together, making a depth of four feet, and one foot in thickness. This plan of building bridges, from the many advantages it possesses, will doubtless supersede most former methods. An arch of this description can be constructed of almost any length, over deep streams, if the banks are high, where an abutment cannot be placed, and all danger to be apprehended from floating ice is effectually obviated. The projector tells us that he could erect an arch, if the banks were quite high, of six or seven hundred feet, that would be perfectly strong and durable.

Among the numerous works of art that render our village an object of interest to visiters, Mr. Cram's new bridge, we predict, will receive a large share of admiration. The best reward that we can wish for the deserving and enterprizing builder, in addition to the encomiums he daily receives from scientific men, is that he may be employed to substitute similar works for the unsightly erections which we now see in many parts of our country.

New Jersey—The annual Convention of this Diocese was held at Newark, in May last.—The Bishop and 15 clergymen, out of 24 attended. The lay deputies present were 30 from 14 congregations, and 18 congregations were not represented. The journal presents a gratifying indication of a prosperous state of things. Four new stone churches are in progress of erection.

Letter from the late Sir James Mackintosh on the Death of his Wife.—Allow me, in justice to her memory, to tell you what she was, and what I owed her. I was guided in my choice only by the blind affection of my youth, and might have formed a connexion in which a short-lived passion would have been followed by repentance and disgust; but I found an intelligent companion, a tender friend, a prudent monitress; the most faithful wives, and as of dear a mother as ever children had the misfortune to lose. Had I married a woman who was easy or giddy enough to have been infected by my imprudence, or who had rudely or harshly attempted to correct it, I should, in either case, have been irretriveably ruined: a fortune, in either case, would, with my habits, have been only a shorter cut to destruction. But I met a woman, who by the tender management of my weaknesses gradually corrected the most pernicious of them, and rescued me from the dominion of a degrading and ruinous vice. She became prudent from affection: and, though of the most generous nature, she was taught economy and frugality by her love for me. During the most critical period of my life, she preserved order in my affairs, from the care of which she relieved me; she gently reclaimed me from dissipation; she propped my weak and irresolute nature; she urged my indolence to all the exertions that have been useful and creditable to me; and she was perpetually at hand to admonish my heedlessness and improvidence. To her I owe that I am not a ruined outcast; to her whatever I am; to her whatever I shall be. In her solicitude for my interest, she never, for a moment, forgot my feelings or my character. Even in her occasional resentment,—for which I but too often gave just cause (would to God that I could recall these moments!) she had no sullenness or acrimony; her feelings were warm and impetuous, but she was placable, tender, and constant; she united the most attentive prudence with the most generous and guileless nature, with a spirit that disdained the shadow of meanness, and with the kindest and most honest heart. Such was she whom I have lost; and I have lost her when her excellent natural sense was rapidly improving, after eight years of struggle and distress had bound us fast together, and moulded our tempers to each other; when a knowledge of her worth had refined my youthful love into friendship, before age had deprived it of much of its original ardour. I lost her, alas! (the choice of my youth and the partner of my misfortunes) at a moment when I had the prospect of her sharing my better days.—This, my dear sir, is a calamity which the prosperity of the world cannot repair. To expect that any thing on this side of the grave can make it up, would be a vain and delusive expectation. If I had lost the giddy and thoughtless companion of prosperity, the world could easily have repaired my loss; but I have lost the faithful and tender partner of my misfortune: and the only consolation is in that Being, under whose severe but paternal chastisement I am cut down to the ground.

Influence of Women on Society.—It is generally believed that the influence of women on any given society is, on the average, much greater than that of men. We speak, of course, merely of the domestic state of society, for in politics and in all public matters the men have long enjoyed a complete monopoly. It is thought too, by many, that the influence which women exercise on mankind might be employed with equal effect by her on morals, and in that case some very important suggestions will at once occur to every mind. "A prudent and moral mother," remarks this translator, in his Preface, "may, in a great degree, counteract in her family the unhappy consequences of her husband's intemperate or dissolute life, much more than it is possible for an honest and industrious husband to counteract the melancholy effects of the conduct of an immoral wife. The wife's sphere is supremely that of domestic life; there is the circle of activity for which she is destined, and there, consequently, she has the greatest influence; and the lower we descend in the scale of society, the greater the influence of woman in her family. If she is unprincipled, the whole house is lost, whilst, if she walks in the path of virtue and religion, she is the safest support of a son, thrown upon the sea of life, or of a husband, oppressed by misfortune or misery, and beset by a thousand temptations. That tender age, in which the very seeds of morality must be sown and fostered in the youthful soul, is much more dependant upon the mother's care than upon that of the father—in all working classes it is almost solely dependant on the former. A woman given to intemperance, and, what is generally connected with it, to violence and immoral conduct in most other respects, is sure to bring up as many vagabonds and prostitutes as she has male and female children; and I believe I am right in stating, that the injury done to society by a criminal woman is in most cases much greater than that suffered from a male criminal.—Around one female criminal flock a number of the other sex, and ask any police officer what incalculable mischief is done by a single woman who harbors thieves and receives stolen goods, called in the slang of criminals *a fence*. I have taken pains to ascertain the history of a number of convicts, and though my inquiry has been but limited, yet as far as it goes, it shows me that there is, almost without an exception, some unprincipled or abandoned woman, who plays a prominent part in the life of every convict, be it a worthless mother, who poisons by her corrupt example the soul of her children, or a slothful and intemperate wife, who disgusts her husband with his home, a prostitute, whose wants must be satisfied by theft, or a receiver of plunder and spy of opportunities for robberies. It might be said that man and woman being destined for each other's company, some woman will be found to play a prominent part in the life of every man, and nothing is more natural, therefore, than that we find the same to be the case with criminals. This is true, and would only corroborate what I say, that the influence of woman is great; but in addition, I maintain that I found that most criminals have been led on to crime, in a considerable degree, by the unhappy influence of some corrupted female." The writer goes on to remark, that a striking difference exists between the progress of crime in women and in men. A woman who once renounces honesty and virtue, passes with the greatest facility, and with far greater ease than man, to the very blackest crimes. A theft by a woman will so harden her heart, that she will not hesitate to commit a murder, whilst a man will go on stealing for half his life, and recoil at the bare thought of imbruing his hands in the blood of a fellow creature. We may remark too, that most of those crimes which are distinguished by peculiar enormity, those of which the popular annals of almost every country make mention, are almost always perpetrated by women. Poisoning is the crime quite exclusively belonging to them. A book was published in Germany very lately, which gave an account of the Marchioness of Brinvilliers, and of the woman Gottfried, who, in 1831, was executed at Bremen for having poisoned more than thirty persons, among whom were her parents, children, husbands, lovers, friends, and servants.—[Monthly Review.]

We have attended a private view of what may be considered a great curiosity in art. The late Lord Dudley was possessed of the *beau ideal* of a dog. It was a Newfoundland of more than ordinary size, and of most amazing beauty. His Lordship loved the animal—

> "————in life the firmest friend,
> The first to welcome, foremost to defend,"—

and determined that his memory should, if possible, be perpetuated. As to the manner in which this was to be achieved, he entertained a peculiar notion, which was, that in all respects a model should be made of him, which should not, like the generality of sculpture, merely give the full form as in a statue, or the outline as in bas-relief; but that an accurate representation of the figure should be given, even to the color of the coat and expression of the eye: This was to be done in marble, and to Mr. M. C. Wyatt the difficult commission was given. To say that he has succeeded is the highest and best praise that can be bestowed on a work replete with so many obstacles. The statue of a beautiful beast is placed on a jasper pedestal, the base of which is surrounded by fruit and flowers in *alto reilevo*. curiously formed by precious stones. On the pedestal is a cushion of Sienna colored marble, looking as soft as if the lightest foot would make a print-mark. On this cushion stands the dog. A bronze figure of a serpent is beneath him, which the powerful animal has crushed with his paw, the introduction of which at once adds to the interest of this curious piece of statuary, and ingeniously serves as a support to the ponderous weight of the dog. Some method must have been adopted for the sustaining so cumbrous a load beyond the mere support afforded by the legs, and nothing of a more effectual nature could in our opinion have been introduced. But the ingenuity, and, in our estimation, the great merit of the work, consists of the singularly felicitous manner in which the artist has represented the shaggy coat in the different colored marble, making the black so beautifully overlay and intermix with the white. The head is also truly beautiful, for not only the introduction

of gems of an exact color fill up the sockets of the eyes, but the fleshy tint which is observable at the extremity of the white part of the eye is managed with the same extraordinary kind of fidelity. The nose, by the insertion of porous-looking black marble, is made to bear the appearance of dewy moisture, so commonly observable, and it requires no exercise of the fancy to suppose that if touched a sensation of moisture would be experienced from the contact.

Effects of Scenery on Imagination.—A dull uniform life lets the imagination sleep and become torpid. I have no doubt that scenery and climate have a great effect upon the spiritual part of the imagination, as well as upon the material. Johnson, I think, became more imaginative after he had visited the Hebrides: at any rate, when our minds contemplate him carried about on the waves of the stormy ocean in which those islands are placed, and sleeping with the northern billows beating at the feet of the castellated rock where he is hospitably received, we have a pleasing idea of him, which revolts at the disputatious dreariness and vulgarity of Bolt-court. —[Sir Egerton Brydges's Autobiography.]

Advantage of Botany.—But my friends cares were not confined alone to the encouragement of happy thoughts in his own mind, or in the minds of others: he was always occupied in some useful deed. One of his constant engagements was spreading through different parts of the world, flowers, fruits, plants, and trees unknown before. He introduced into this country the sultana raisin from Turkey; and of rarer fruits, the hothouses of his friends were crowded with specimens collected by his care. When he had ascertained the habits of any useful vegetable, great was the ardor with which he sought to spread the knowledge of it in the places where it was likely to prosper. In this way it would not be easy to calculate how much he added to human enjoyment, nor the debt that future generations will owe to his kind concern for his race. He preferred botany to all the other departments of natural philosophy, because its pleasures could not be made so diffusive; and he valued plants as he valued men—in proportion to their usefulness. "You cannot," he would say, "multiply minerals, nor insects, nor animals at will; you cannot communicate to others this species of your riches without self deprivation; but of most vegetable productions you can easily increase the number: you can enrich others without impoverishing yourself."—[Bowring's Minor Morals.]

A Utilitarian in the Fields.—He talked to his boys of the beauties of nature that surrounded them, and showed them in what a wonderful variety of ways beauty is a source of pleasure. He bade them listen to the songs of the birds, to the fall of the waters, to the thousand sounds of the earth and air,—teaching them how each added something to the great account of living happiness. When the wind blew in their faces, or the sun shone on their foreheads, or the frost bit the ends of their fingers, he told them how each administered to man's enjoyment. If the air was fragrant with the flowers of spring, or the sweet hay of summer, he explained to them how the organs of smell were made subservient to the same great end; and as they looked upon the different tribes of busy creatures partaking of the various food presented to them by their Maker's munificence, he pointed out how numerous their pleasures; how marvellously provided for, how infinitely spread. "See," said he, "the great purpose of Providence; the general lesson of creation —happiness." And the thought again came over Arthur's mind, that anger never made any body the happier.—[Dr. Bowring's Minor Morals.]

Vegetable Existence.—If we review every region of the globe, from the scorching sands of the equator to the icy realms of the poles, or from the lofty mountain summits to the dark abysses of the deep; if we penetrate into the shades of the forest, or into the caverns and secret recesses of the earth; nay, if we take up the minutest portion of stagnant water, we still meet with life in some new and unexpected form, yet ever adapted to the circumstances of its situation. The vegetable world is no less prolific in wonders than the animal. Here, also, we are lost in admiration at the never-ending variety of forms successively displayed to view in the innumerable species which compose this kingdom of nature, and at the energy of that vegetative power which, amidst such great differences of situation, sustains the modified life of each individual plant, and which continues its species in endless perpetuity. It is well known that, in all places where vegetation has been established, the gems are so intermingled with the soil that whenever the earth is turned up, even from considerable depths, and exposed to the air, plants are soon observed to spring, as if they had been recently sown, in consequence of the germination of seeds which had remained latent and inactive during the lapse of perhaps many centuries. Islands formed by coral reefs, which have risen above the level of the sea, become, in a short time, covered with verdure. From the materials of the most sterile rock, and even from the yet recent cinders and lava of the volcano, nature prepares the way for vegetable existence. The slightest crevice or inequality is sufficient to arrest the invisible germs that are always floating in the air, and affords the means of sustenance to diminutive races of lichens and mosses. These soon overspread the surfaces, and are followed, in the course of a few years, by successive tribes of plants of gradually increasing size and strength; till at length the island, or other favored spot, is converted into a natural and luxuriant garden, of which the productions, rising from grasses to shrubs and trees, present all the varieties of the fertile meadow, the tangled thicket, and the widely spreading forest. Even in the desert plains of the torrid zone, the eye of the traveller is often refreshed by the appearance of a few hardy plants, which find sufficient materials for their growth in these arid regions; and in the realms of perpetual snows which surround the poles, the navigator is occasionally startled at the prospect of fields of a wide expanse of microscopic vegetation.—[Dr. Roget's Bridgewater Treatise.]

A Dutch Landscape.—Towards evening we entered the dominions of the United Provinces, and had all their glory of canals, treck-schuyts, and windmills, before us. The minute neatness of the villages, their red roofs, and the lively green of the willows which shade them, corresponded with the ideas I had formed of Chinese prospects; a resemblance which was not diminished upon viewing on every side the level scenery of enamelled meadows, with stripes of clear water across them, and innumerable barges gliding busily along. Nothing could be finer than the weather; it improved each moment, as if propitious to my exotic fancies; and, at sunset, not one single cloud obscured the horizon. Several storks were parading by the water side, amongst flags and oziers; and, as far as the eye could reach, large herds of beautifully spotted cattle were enjoying the plenty of their pastures. I was perfectly in the environs of Canton, or Ning Po, till we reached Meerdyke. You know fumigations are always the current recipe in romance to break an enchantment; as soon, therefore, as I left my carriage and entered my inn, the clouds of tobacco which filled every one of its apartments dispersed my Chinese imaginations, and reduced me in an instant to Holland.—[Mr. Beckford.]

A Parasite Tree.—I have recently, on a visit to Mr. Gee's plantation, three miles south of Quincy, Gadsden county, in this territory, observed a natural curiosity, the following description of which may be interesting to you and many of the readers of the American Journal of Arts and Science: It is a yellow pine tree bearing another in a perfectly healthful and flourishing state, like itself and those in the woods around them. The trees, as represented in this sketch, are united about thirty-five feet from the ground, where they entwine around each other. The one that is borne extends down to within about two feet of the ground, and is alive and healthful to its lowest extremity. These trees have been in the condition in which they now are for a period longer back than the first settlement of the country by the present population. They were pointed out by the Indians as a curiosity to the first Americans who came to Florida. The stump of the tree which is borne has long since disappeared, and the place which it occupied is now grown up in small bushes of grass.—[Letter in Silliman's Journal.]

A tried Recipe for Burns.—Keep on hand a saturated solution of alum (four ounces in a quart of hot water) dip a cotton cloth in this solution and lay it immediately on the burn. As soon as it shall have become hot or dry, replace it by another, and thus continue the compress as often as it dries, which it will, at first, do very rapidly. The pain immediately ceases, and in twenty-four hours under this treatment the wound will be healed, especially if the solution be applied before the blisters are formed.—The astringent and drying quality of the alum completely prevents them. The deepest burns, those caused by boiling water, drops of melted metal, phosphorus, gunpowder, fulminating powder, &c., have all been cured by this specific.—[Jour. des Connais Usuelles.]

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INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,

Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,

Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m2

We are gratified to learn that Professor Edward H. Courtenay, late Professor of Natural and Experimental Philosophy in the United States Military Academy at West Point, has accepted the chair of Mathematics in the University of Pennsylvania. Dr. Thomas C. James, who for a long time, has filled with great ability the professorship of Midwifery in the Medical Department of that institution has resigned his chair, which is now vacant, and to fill which, it is understood, nominations will be received by the Board of Trustees at their next stated meeting, which will be held early in September.—[Philadelphia U. S. Gazette.]

Drowned from on board one of the Canal boats in the river, on the night of the 7th inst, James McConnachie, a native of Aberdeen, Scotland; naturally of a warm hearted and generous disposition. His untimely fate will be deplored by highly respectable parents and an affectionate wife.—Albany Evening Journal.]

[*From the Balt. American.*]

Late Georgia papers contain a long publication signed by the counsel of the Cherokee Indians, detailing the particulars of a personal controversy between them and Governor Lumpkin of Georgia. In a correspondence between the Governor and the military authorities concerning the recent apprehensions of hostilities in the Indian country, he had attributed the blame to what he termed a "free combination of men" who, for professional gain, were encouraging the Indians in litigation, and fomenting their discontent with the State proceedings. Messrs. Hansell and Rockwell, two of the counsel of the Cherokees, considering themselves injuriously treated in this allusion, addressed separate letters to the Governor, requiring an avowal, whether, in the exceptionable passages, they or either of them were intended by him. He seems to have treated the application very cavalierly—sending back the letters in a blank envelope to the writers. They have accordingly joined in an appeal to the public, in which they give an unqualified denial to the Governor's charges, and challenge him to produce proof. They apply to the conduct of the Governor such descriptive epithets as occur to men who believe themselves wronged without provocation or justice.

Intelligence from Texas, contained in the New Orleans papers, shows that considerable excitement prevails there respecting the continued imprisonment of Col. Austin by the Mexican government.—On the 14th May, Austin was still in prison, though not so strictly confined as previously. Santa Anna had enlarged the bonds of his confinement, and expectations were entertained that he would be relieved within a week.

At Texas, the Alcade of the muncipality of *Austin* had summoned a meeting of the ayuntamiento, to consider the treatment of Col. Austin, and the general subject of a State government for Texas, which forms the cause of dissatisfaction between Austin and the Mexican authorities. The address of the Alcade is published in the New Orleans Bulletin. It is an animated appeal to the people to assume the responsibility of the acts for which Austin is imprisoned, and unite in an energetic demand for a State government. A general memorial to government to this effect is recommended.

In the present political divisions of Mexico, Texas is attached to the province of Coahuila,—and all laws emanate from that legislature. These are not very strictly enforced, the Colonists yielding obedience, in general, and without much interference, only to those which suit their views and position. Among the State laws recently enacted, is one establishing entire toleration of all religious sects, and another establishing the trial by jury. These salutary regulations must not be confounded with the federal enactments of the Mexican Congress, out of which the late civil disturbances have grown. They are State laws They are expected to quiet the minds of the settlers, and reconcile them to a longer continuance of their dependant connexion on Coahuila.

The national boundaries of Texas include a territory larger than the kingdom of France, and from its fertility, capable of sustaining a much larger population. France supports now about thirty two millions.

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by

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MECHANICS' MAGAZINE.

THE third Volume is now ready. It consists of 384 pages of letter press, and is illustrated by nearly 150 engravings on wood, spiritedly executed, and a full length portrait of LA FAZETTE, on copper, as a frontispiece.

The following are a few only of the numerous notices taken of the Magazine by gentlemen connected with the press in different sections of the country:—

A rapid glance at its contents discovers that it contains the same judicious preparation of materials that has hitherto distinguished the publication. There are a number of articles, essentially valuable from the solid information embodied in them, and others, again, that will recommend themselves at once to the less severe reader, who always looks for some entertainment to be mingled with instruction.—[N. York American.]

The theoretical and practical Mechanic will find a mine of useful information in these pages.—[Mercantile & Advocate, N. Y.]

This periodical really deserves credit for the ability and attention with which it keeps pace with the mechanical improvements of the age. It is, we see, edited by Mr. Knight, late of the London Mechanics' Magazine, a work which did more to elevate the state of knowledge among the working classes, than any other in England.—[Commercial Advertiser.]

It is stored with representations and descriptions of improvements in machinery, and of newly invented articles, together with information valuable to every class of citizens.—[U. S. Gazette, Philad.]

It contains information on almost every subject connected with mechanics, and a register of inventions and improvements.—[Montreal Gazette.]

It is a work well worthy the attention of every mechanic and one which affords to genius a chance of exhibiting talents. —[New Orleans Merc. Adv.]

This is a publication of practical value and of deserved popularity.—[Albany Argus.]

The work needs only to become known to insure it a very extensive circulation. It certainly cannot fail to be highly interesting and useful to the numerous class of persons for whom it is particulary designed.—[Paterson Intelligencer.]

There is no periodical in this country which more deserves the patronage of the mechanic than this, and which will better repay him for the expense incurred and the time spent in its perusal.—[Elmyra Gazette.]

We wish we could persuade our young operatives—upon whose intelligence and virtue so much depends—to substitute the substantial fare which this work affords, for the trash which many of them are too eager to devour.—[N. J. Journal.]

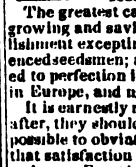
It forms a truly valuable repository, alike suitable to the drawing room and to the cottage.—[Watertown Register.]

Every mechanic who wishes to keep pace with the improvement of the age—to avail himself of the aid which science is constantly bringing to art, should subscribe for the Mechanics' Magazine.—[Washington Spy.]

Having perused the first volume of your journal with much satisfaction, and I trust some profit, I deem it my duty as an old mechanic, to tender you my acknowledgments. * * * * In my opinion, it ought to be owned by every mechanic, artificer and manufacturer of our country; and especially by beginners, and made the study of all their leisure hours.—[Benj'n Russell, one of the oldest mechanics in Boston.]

The Mechanics' Magazine and Register of Improvements is published by the Proprietors, D. K. MINOR and J. E CHALLIS, at No. 35 Wall street New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, *in advance*—JOHN KNIGHT, (formerly Proprietor of the London Mechanics' Magazine,) Editor. jy18 tf

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

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*** Mr. Thorburn is also Agent for the following publications, to wit:—

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MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*, either or all of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany.*

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

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LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

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The engines will be adapted to the use of anthracite coal-pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, 200 do. 1¼ do. ¾ do. 40 do. 1¼ do. ¾ do. 800 do. 2 do. ¾ do. 800 do. 2¼ do. ¾ do. soon expected. *Flat Bars* in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

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☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Gonlometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norriet. Railroad

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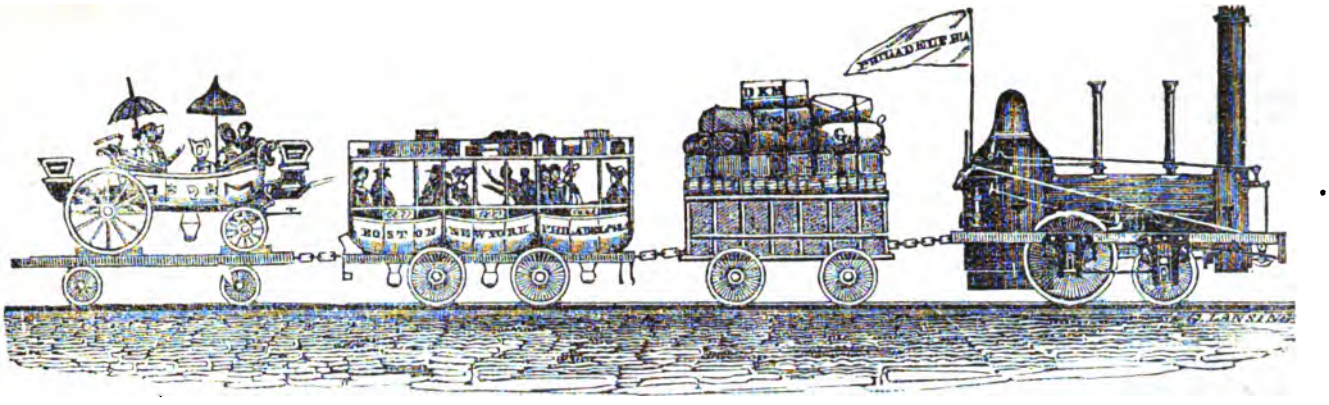

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] **SATURDAY, AUGUST 23, 1834.** [VOLUME III.—No. 33.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, AUGUST 23, 1834.

New York and Erie Railroad.—We learn with pleasure, from an authentic source, that the surveys made and making of routes for this important road, insure the *certainty*, not only that the road *will* be made, but that the face and form of the country through which it will pass, are such as to afford in one stretch a continuous line of 250 miles with such easy grace that a locomotive can be used throughout. Indeed, a line may, it is ascertained, be carried from a point in the vicinity of Binghampton, Broome co., to within eight miles of Lake Erie, without requiring the employment of a stationary power.

We hope to see this road set about in earnest, and under the countenance too of the State. The South-western tier of counties are entitled to some aid, and the general interest of the State will be advanced by this new channel between the commerce of the Lakes and of the Atlantic at this city.

Steam Navigation to India.—The following are the resolutions of the Committee on Steam Navigation to India, as reported in the House of Commons on Monday evening :

"1. Resolved, That it is the opinion of this committee, that a regular and expeditious communication with India, by means of steam-vessels, is an object of great importance both to Great Britain and to India.

"2. Resolved, That it is the opinion of this committee, that steam-navigation between Bombay and Suez having, in five successive seasons, been brought to the test of experiment (the expense of which has been borne by the Indian Government exclusively,) the practicability of an expeditious communication by that line during the north-east monsoon has been established.

"3. Resolved, That it is the opinion of this committee, that the experiment has not been tried during the south-west monsoon; but that it appears from the evidence before the committee, that the communication may be carried on during eight months of the year, June, July, August, and September being excepted, or left for the results of further experience.

"7. Resolved, That it is the opinion of this committee, that the steam-navigation of the Persian Gulf has not been brought to the test of experiment; but that it appears from the evidence before the committee, that it would be practicable between Bombay and Bussorah, during every month in the year.

Overland Journey to India.—Among the modes of overland communication with India, one is to be noticed which has been some time set on foot under the direction of Mr. Robert Tod, a British merchant established at Damascus, and who has also a house at Bagdad. He has organized a line of couriers from Damascus to Bagdad and Bussorah, aided by Colonel Taylor, the British resident at the latter places, and with the concurrence of the present authorities in Syria. A courier is despatched once every twenty days from Damascus, and performs the journey to Bussorah in from 16 to 23 days. Despatches are forwarded from Bussorah by the first vessel from Bombay. There is a monthly communication between Constantinople and Aleppo by Government Tartars, who usually take 15 days between these two cities. This route has the advantage over others of being less exposed to the uncertainties of the sea. The ordinary time required from London to Bussorah would be about seventy day in this way, thus—London to Constantinople, the post is twenty-seven to thirty days; Constantinople to Aleppo, by the Tartar, 15 days; Aleppo to Damascus, 7 days; Damascus to Bagdad, 8 to 15 days; Bagdad to Bussorah, 7 days—Total, 74 days. Between Bussorah and Bombay there are communications more or less frequent, according to the mousoon. In cases where the expense was not regarded, the time might be curtailed nearly one half. An express goes from London to Constantinople in 16 to 18 days. A Tartar, well paid, will perform the journey from the latter city to Aleppo in six days.

Notice.

Oswego, Utica, & Albany Steam Boat Canal or ship Navigation.

To the Public.—The undersigned, Chairman of the Committee appointed by the citizens of Utica to hold correspondence with different sections of this State on the propriety of memorializing the Legislature to make a Steam Boat or Ship Canal navigation from Lake Ontario to Utica & Albany, gives notice that at a late meeting of said committee it was resolved, that it is expedient to hold a convention at Utica, on the 11th of September next, (the day after the two politicial State conventions) at 12 o'clock at noon, to consult on measures for the furtherance of said object; and that the said committee especially recommend that the towns in the counties of Oswego, Onondaga, Seneca, Cayuga, Madison, Jefferson, Oneida, Herkimer, and such wards in the cities of Schenectady, Troy, Albany and New York, and such other places and towns in this state as see fit, send as many delegates to said convention as they deem proper, to consider on this grand important improvement by which the State of New York will become a fair competitor with Pennsylvania and Canada for the travel and the transportation of the Great West, and finally complete that chain of internal improvement which nature has so liberally commenced.

Thomas Goodsell, *Chairman.*

Utica, August 7, 1834.

N. B. Editors of Newspapers in the cities and counties, interested in this great improvement are respectfully requested to insert the above notice.

Canal Steamboat.—The grand desideratum of a steamboat for canal navigation seems to be at length attained. We have had the pleasure of conversing with the proprietor of a small steamboat of 30 tons, which arrived here yesterday, by the Delaware and Raritan Canal, from Hartford, Connecticut, where she was built. She is intended to ply between Macon and Darien in Georgia, and is described by the gentleman who superintends her passage to that point as fulfilling, in every respect, the expectations of all concerned. She is 90 feet in length, 16 feet beam, with the paddle wheel at the stern. She has made 15 miles an hour with, and 8 miles against the tide.

Her draught is two feet. She leaves here tomorrow for the south, through the Chesapeake and Delaware Canal.—[Phil. Herald.]

Extract of a letter from a gentleman at the South :

"I have long been desirous to bring the attention of the public, (and shall be glad to do so through the pages of your Journal,) to the project of running a railroad from St. Mary's, Geo., to St. Mark's, in Florida. I question if there is in the United States another railroad scheme which promises capitalists greater profits, in proportion to the capital necessary to be employed in its construction, or more beneficial results to the citizens generally. The route was surveyed seven or eight years ago, by that eminent engineer, General Bernard, of the Topographical Corps, and ascertained to be eminently favorable to such a work, though its adaptation to canalling may perhaps be doubtful. I have, within a few weeks, sent several pieces to the North Carolina papers, on the subject of the railroads proposed to be made in that state by the late Convention at Raleigh. But there is so much of local feeling and opposition pervading the several committees, &c., which have taken up the subject, that there is great danger that the whole plan will be dropped. The desideratum would seem to be a railroad from the Virginia line, about the centre of the State, at Weldon, for instance, through its whole length to the South Carolina line, at Charleston; there it would meet the railroad just finished from Hamburgh, near Augusta, Georgia. This, including the Portsmouth and Weldon Railroad, would form a continuous line of road of 250 miles, through one of the greatest thoroughfares in the United

States, and where there could be no rivalry. I flatter myself the people will ultimately see the course of their true interests, and pursue it; disregarding the clamors of committees, who will be content with nothing less than an exclusive attention to the prosperity of their own districts. In reply to your question in relation to the projects suggested in your letter* I would say, that I am in favor of examining all great schemes which give hope of advancing individual or general prosperity; at the same time, I must confess that I am so firmly convinced of the superior advantages of railroads adapted to locomotion, that there must be some strong extra consideration to induce me to adopt a *canal* scheme in preference. It strikes me that a formidable obstacle to the success of your canals will be found in the nature of the climate through which they must pass; one-fourth of the year, and perhaps more, they must be locked up by the frost. Will not this interfere with profits as well as the convenience of all concerned? Such may exist in those suggested by yourself, without more knowledge of the face of the country through which they must be carried. I do not feel authorized to say more, than that they display an elevated spirit of enterprize, and being "broached" by yourself, I doubt not the subject will enlist some eminent talent in its consideration.

Very respectfully I remain, &c.

R. H. Bradford.

D. K. Minor, Esq.

We are probably as much devoted to *Railroads* as our esteemed correspondent, and have in nine out of ten cases recommended them. Yet, there are situations, as for instance the *Louisville and Ohio Canal*, where, by the construction of short works, an extensive steamboat or ship communication may be opened, which is probably far superior to railroads. Such we consider the proposed canals, which, when completed—and *completed they will be*—will open an inland communication superior to any other in the world.—[Ed. R. J.]

Remarks on the Speed attained by Canal Boats.

Boston, 4th Aug. 1834.

To the Editor of the Railroad Journal.

Sir,—I regret that you did not reprint a very able criticism in the London Mechanics' Magazine, on Mr. M'Neill's experiments on canal navigation, and which apply as well to the paper by Mr. Robinson, which you lately inserted. Notwithstanding the assertions of Messrs. Graham, Houston, Robinson, M'Neill, &c. the law regarding the resistance of the water to vessels floating on its surface, remains precisely as it was. They have the merit of directing the public attention to the best forms of boat for smooth water, and in this they are but copyists. In their experiments, where great speed was obtained, the boat was drawn by *horses*, and the water acting, in some measure, as a wedge, in front, the boat rose from its ordinary draught, and was sustained in that position by the fatiguing and constant exertion of the animals, relieved every 5 or 6 miles. The least intermission in the speed of the horse allowed the boat to settle to its natural draught, and this occurring at the passage of every boat, and at every stopping-place for passengers, the labor was excessive.

With the power *in* the boat, the same results have not been obtained. The experiments with steamboats altogether failed; and the boat at present plying as a tug-boat on the Forth and Clyde Canal, and which would have been fitted for passengers, had the parties had any confidence in their own assertions, never has realized an average speed of more than 6 miles per hour, and ordinarily not more than 5. If the scheme is in reality feasible; if the results are true, where are the boats?—where is the actual practice of the facts? Every exertion has been made by the proprietors of these canals, and the utmost they have obtained is by a boat like a razor, of about 36 inches beam, where the passengers, with threaded legs, are not at liberty to move, lest the boat should crank with this species of shuttlecock, and relays of horses every 5 miles: they have gained a speed of 9 miles an hour, and talk of their discoveries in science, and their superiority to the railroad for time. Why have they not built boats adapted to the improved state of the science; travelling with ease, at say only twelve miles per hour, and admitting of some little comfort to the passengers, say the power to blow one's nose! No expense has been spared on the Forth and Clyde Canal; for they had to compete as well with the turnpike road as with the promoters of a railway in the same neighborhood, and in opposition to which these experiments and exertions were made. The confined channel of all canals must always render them inferior to open water. With the same means the same speed can never be attained on the one as on the other. Mr. Burden's model, I trust, may be of assistance to them, but that they ever can compete with railroads in speed, considering the two mediums, is probably altogether out of the question. Feeling as much interest in canals as any other species of conveyance, I should be very glad to see their assertions verified; but, at present, I can perceive nothing more than the efforts of some very extensive canal proprietors, to maintain the value of their stock in the market.

Very respectfully, Sir,

S. D.

The article alluded to by S. D. escaped our observation. We will examine it the first opportunity, if we can find it; and if proper, publish it. Truth is ours, as we are confident it is the object of the gentleman first alluded to in the communication of S. D.—[Ed. R. J.]

Packet Waggons. By Publicola. To the Editor of the Railroad Journal and Advocate of Internal Improvements.

For the conveyance of packets, or small packages, from one part of our country to another, the following system may be adopted. A store is selected in New-York city as a receiving, forwarding, and distributing office. A package is deposited there, directed to some town in the United States, as Haverhill, Mass. From New-York it is then carried with other packets to Boston, to a receiving office there. Here packets are distributed to different parts of the country; and the packet to Haverhill is carried to an office there. If it is a regular periodical publication, the person to whom it is sent knows when to call for it; or, if he has directed a parcel to be transmitted to him, he expects it of course; but, if it is sent to him by a friend, a letter by mail announces the coming package.

Respecting the expediency of establishing such a system of packet waggons, the following remarks may be made.

There is now a great amount of transportation over the country. I have seen it stated that one mail has carried from New-York 3,000 pounds of letters and packets. It has been remarked of the mails from Boston that they are excessively loaded. But the stages do not convey all the periodicals that circulate over the country; for many go by water, and many are distributed by private opportunities. Add together all the literature that is dispersed over the country, critical, scientific, fictitious, classical, and religious—weekly, monthly, quarterly, annual, and occasional—and you have a vast amount of paper to be conveyed.

But it may be further observed that the amount of transportation increases. The literature of the present day is of a more periodical character than it has been, and periodical publications are many of them of more solid worth than formerly. Books are made cheaper, and they are printed in greater abundance, and the reading population is vastly increased, and there is therefore a much increased transportation of printed paper. The transportation increases also by the influence of great printing establishments. By having a wide circulation for their books, they can print them in great numbers, and by superior presses, and with steam power; and thus they can afford them cheap, and very distant readers are advantageously supplied.

Another fact may be attended to. Transportation by waggons may be much cheaper than by mail stages. It costs four times as much to transport a load at the rate of eight miles an hour, as to transport it at the rate of two miles an hour. Packages might easily be carried 33 miles a day at one-third the expense now attending the conveyance by mail coaches; and for most purposes this would be sufficiently rapid. From New-York, by steam and wind, packages might be carried cheaply and expeditiously to the North and South, to Bangor, Portland, Boston, and New-Haven—to Norfolk, Charleston, and Savannah. From some of these larger depots, lines of conveyance may be established to places of inferior importance, so that every family might find within ten miles, and most families within two or three miles, a place of deposit, where parcels might reach them from distant sections of the Union.

It may again be noticed that the course of trade now requires more transportation. Business is conducted by larger establishments, and the public is benefitted by it. Said Mr. S., a close, calculating farmer, "You may now buy a handsome, iron-hooped, painted pail cheaper than neighbor A. sells one of his clumsy ones." Though neighbor A. loses his business of making pails, the town is on the whole greatly benefitted, and he can turn his hand to some other profitable business; and we can send 100 miles and get our pails cheaper than a cooper at our next door can afford to sell them. This is a specimen of the advantages arising from good means of communication. It was stated not long since in England, that fine goods, parcels of value, and all light articles, which needed to be conveyed with speed and certainty, were sent at great expense by coaches. In many cases light and small articles would be sent by a regular line of conveyance, though more expensive than by the present ordinary routes of trade. The means of communication that now exist have scattered friends and relatives widely from each other, and a regular system of transportation would accommodate them, and be improved by them.

The system recommended now exists to some extent. From one seaport to another bundles are carried by packets, and distributed according to the direction on them; and in some cities, baggage waggons carry goods into the interior towns. This system thus commenced may be made more complete. A deposit store is selected in New-York for Boston or Portland. A packet or steamboat takes the packages left in them, and sends them on in the line with which it is connected, to Boston, Portland, or Bangor, according to their direction. In Boston, if directed to a town near there, they are placed in the deposit store, and the packet waggon that passes to or through that town forwards them; and here they reach their destination; and from the deposit store here they are taken by the person to whom they are sent. I live in the country, about 30 miles from a seaport. I have articles sent me 100 miles by water. The packet master takes these articles to the seaport nearest me, and there the merchant with whom he stores them pays the freight, and one who brings them up to me pays the freight to the merchant, and I pay the whole cost of transportation to him; both what he paid and what he is to receive for conveying the articles by land.

The establishment of a general system of

* The subject here alluded to is that of a ship canal from the Hudson to Lake Ontario, from thence around Niagara Falls to Erie; from Lake Erie through the Maumee and Wabash, or from Chicago on Michigan to the navigable waters of the Illinois river.—[Ed. R. J.]

transportation will help the publishers of books and periodicals, and it will help families.

It will help families. If they wish for a book from their nearest market town, there is a regular line to convey it. If they wish for a book or periodical from a distant city, they can obtain it. They write to the bookseller: he places it in the deposit store, and it is forwarded. Thus families in remote towns have easy access to the literature of the day. If a benevolent society wish to procure a quantity of tracts, or Sabbath school books, they have only to send to a remote establishment, and a bundle is placed in the deposit store, and it goes on to their direction like a letter in the mail.

Such a system of transportation again will help publishers. Postage is one impediment to the circulation of periodicals. It often amounts to one quarter, to one half, or even three quarters the original cost of the periodical. This operates like a heavy duty. Remove this duty, and the circulation of periodicals will be greatly increased, and books in general will be purchased more freely, and printers and booksellers will find increased encouragement.

But to establish such a system a clause in the post office law must be repealed, which enacts "that no person, other than the post-master-general, or his authorized agents, shall set up any foot or horse post, for the conveyance of letters and packets upon any post road which is or may be established as such by law." But if it is seen that the public interest requires the repeal of this clause, Congress can repeal it; and printers, publishers, booksellers, and buyers, can petition for this object.

PUBLICOLA.

LIST OF CANALS IN THE UNITED STATES.

(Continued from page 469.)

HUDSON AND ONTARIO SHIP CANAL.—The Erie canal in a few years will not, indeed it is not now, in ordinary seasons, be competent for the western trade; and if not now equal to the demands, what will it be in a few years hence, when the millions of acres, the most fertile in the world, now unoccupied, shall be brought into cultivation?

A SHIP Canal from the Hudson to Lake Ontario may be constructed for ten millions, probably *eight* millions of dollars; another around the Falls of Niagara for five millions, which would give an inland ship and steamboat navigation of fifteen to eighteen hundred miles; and a navigation, too, superior to any other inland navigation in the world. Then, with five millions more, a canal to correspond may be made from Lake Michigan to the navigable waters of the Illinois, which would give an uninterrupted inlandship communication of 3,500 miles. *Can* it be done? Yes—without difficulty. New-York *could* do it. *Will* it be done? *Yes*; but the *when is*, I apprehend, another affair. It can be done with as great ease as the British government can make a ship canal around the rapids of the St. Lawrence, for which it has recently appropriated $3,000,000, with a view of anticipating us, and of intercepting our western trade.

CHESAPEAKE AND DELAWARE CANAL, from the Delaware river to Elk river, which discharges into Chesapeake Bay, 14 miles, long breadth 60 feet. It is calculated for vessels of draught not exceeding 10 feet.

CHESAPEAKE AND OHIO CANAL.—[See page 370.]

WISCONSIN PORTAGE CANAL.—A charter has been granted for a canal to connect the waters of the *Fox* and *Wisconsin* rivers of the north-western territory, by which there will be a water communication from the northern part of Lake Michigan, or Green Bay, to the Mississippi, at Prairie Du Chien, through these rivers.

LONDON, U. C., AND ONTARIO RAILROAD.—This road, if made, will become a great thoroughfare for those who emigrate to Michigan, even from the north-east, as it will be much the shortest route to the "far west," especially when the Boston and Ogdensburgh railroad shall be completed.

ONTARIO AND RICE LAKE CANAL, U. C.—The British Government have it also in contemplation to construct a canal from Lake Ontario to Rice Lake, and probably thence to Shallow and Simcoe Lakes, to connect with George's Bay, Lakes Huron and Superior, without passing Detroit. This work, to Rice Lake, a distance of 14 miles from Port Hope, is estimated to cost £101,535 15s. 6d. The elevation to be overcome is 361 feet. From Rice Lake to Simcoe and Georges, or Iroquois Bay, the communication is not difficult.

RIDEAU CANAL, U. C.—This canal connects the St. Lawrence, near Kingston, with the Ottawa River, at Bytown. The mouth of the canal above the level of tide-water is 110 feet, and 283 feet below the Rideau Lake, which is the summit level, and 139 feet below Lake Ontario, at Kingston. Its distance from Montreal is 120 miles, and from Kingston by water, 160, by land 130 miles. The Rideau Lake is 85 miles from the Ottawa. The outlet or river is not, for the first six miles above the Ottown, used as the bed of the canal. The first rise from the Ottawa is 80 feet, overcome by eight locks. There is a basin sufficiently large for several boats between the fourth and fifth lock, and another at the end of the eighth, over which is a beautiful arch of cut stone, to afford an easy communication between Upper and Lower Bytown. These locks are 33 feet in breadth, and in length 134; or sufficiently large to admit the passage of steamboats. Their cost is estimated at £45,700. In this vicinity may be seen the "Union Bridge," one of the most daring undertakings ever conceived. It connects Upper and Lower Canada, and is thrown directly over the Falls of the Chaudiere, by means of the numerous rocky islands. It has *six* distinct arches; one of which is 210 feet, over the Grand Chaudiere, and another of 160. From Bytown, where the canal enters the Ottawa river, to the Rideau Lake, are fourteen rapids, which are overcome by twenty locks of various lifts, amounting to 283 feet. The summit level is 45 miles in length, when it communicates with Mud Lake by a cutting, for a mile and a half, of ten feet. From Mud Lake it passes into "Indian," and then, by a cutting, into "Cataraqui" river, which it follows to within fifty-five miles of Kingston. It follows the river and small lakes, and passes until it enters the "Kingston Bay," on Lake Ontario, 5 miles from Kingston. There are four locks, of nine feet each, at its termination. Rideau Lake is 145 feet above the Lake, and 283 above the *Ottawa* river, making the rise and fall 437 feet in a distance of 160 miles. This canal is the result of a wise policy of preparing in peace for war, and also of making such improvements, on *national* account, as tend alike to promote a country's prosperity in peace, and in war contribute to its safety and defence. Such is the policy of our natural enemies; and shall we, as a nation, do nothing upon a scale equally *national* to counterbalance it in case of another war? The true policy of this government is to construct a ship canal from the Hudson to Ontario—from Ontario to Erie, around the Falls of Niagara, and then from Chicago, on Lake Michigan, to the navigable waters of Illinois river, which will enable us to counteract any advantages to be derived from any works of the British government in Canada. We can then approach the Lakes from New-York or New-Orleans. Sooner or later it will be done.

CULTIVATION OF WHEAT.—To raise good wheat is considered, both in America and Europe, as an object of prime consequence to the cultivator, and agricultural writers have of course been very voluminous on the subject. We shall select and condense some of their remarks, which appear to us of the greatest importance, and add what our own observation and experience have suggested.

Wheat is thought to be the most useful of the farinaceous plants, and as the bounty of Providence has generally decreed that those things which are most useful shall be most common, wheat will accordingly grow in almost any part of the globe. It thrives not only in temperate, but in very hot and very cold regions: in Africa and Siberia, as well as in the United States and Great Britain. It requires a good loamy soil, not too light, nor too heavy. The Memoirs of the New-York Board of Agriculture, vol. ii., p. 28, state that "wheat grows best on land which contains just as much clay as can be combined with it without subjecting the wheat to be frozen out.' And the author of that article, Mr. Amos Eaton, observes 'since it is the clay which absorbs and retains most of the water injurious in wheat soils, I adopted a rule for the consideration of farmers, founded on that principle, and confirmed by all the observations I have been enabled to make. Rule: Wash a little of the soil in a tumbler of water, and observe the time required for it to become clear. If the time required exceeds three hours, it may be considered as liable to be injured by frost.' W. Van Dusen, a farmer of Rensselaer county, N. Y., says, 'that if wheat be sowed the last week in August, on clay soil, it will generally resist the effect of frost in the winter, and of insects in the spring.' 'A clay soil,' according to the same work, 'having absorbed a large proportion of water, becomes cellular as the water freezes, or rises up in various protuberances, so that the roots of the wheat plant become disengaged from their hold in the soil. It is very manifest that if wheat be sowed so early that each plant may have time to extend its roots into the soil, its chance for retaining its hold will be better.' We believe that not only clay, but lime, chalk, marl, or other calcareous substance, is necessary to bring wheat to perfection, and the grounds of our belief we shall exhibit hereafter.

The Complete Farmer says, that 'the best time for sowing wheat is about the beginning of September. But if the earth be very dry, it had better be deferred till some showers have moistened the soil. Mr. Mortimer says he has known wheat to be so mustied and spoiled by laying long in the ground before rain came, that it never came up at all. To which he adds, 'that he has seen very good crops of wheat from seeds sown in July.' We should apprehend, however, that it would be necessary to feed wheat sown so early, in order to prevent its going to seed the first year, or getting too far advanced in its growth to resist the frosts of the succeeding winter. Sowing in dry ground is generally recommended for seeds; but wheat, being liable to be smutty, is commonly prepared by steeping in brine or lime, and in consequence of the steep, vegetation commences, and if the seed in this state is placed in earth, which is and continues for any time dry, vegetation is checked by the drought, which kills or greatly injures the seed.

Early sowing requires less seed than late, because the plants have more time, and are more apt to spread, and throw out a good number of stalks. More seed is required for poor than for rich lands, and rich land early sowed requires the least of any. Bordley's Husbandry says, 'the climate and soil of America may be believed to differ greatly from those of England respecting the growth of some particular plants. Wheat sown there two or three bushels on an acre yields great crops. Two bushels an acre, sown in Maryland or Pennsylvania, would yield straw without grain. In Maryland three pecks are commonly sown. I never had better crops than from half a bushel of seed wheat to an acre, in a few instances. In these instances the ground was perfectly clean and fine, after many ploughings or horse-hoeings of maize, [Indian corn,] on which the wheat was sown in September, while the maize was ripening. It was a clay loam highly pulverized. But because of the loss of plants at other times, I preferred to sow three pecks an acre.' 'Grain, which is thin sown,' says the Complete Farmer, 'is less apt to lodge. Every one must have observed that in places where foot-paths are made through wheat fields, by the side of the paths, where the corn is thin, and has been trodden down in winter and spring, the plants have stood erect, when most of the corn in the same field has been laid flat on the ground, an advantage proceeding from the circumstance of the stalks having more room.'

The Farmer's Assistant asserts, that 'the time for sowing wheat probably depends much on previous habit. Thus if it were sown a number of successive years by the middle of August, and then the time of sowing were changed at once, to October, the crop would probably be much lighter on that account; yet, where wheat has become habituated to be sown late, it will do tolerably well. The later it is sown, however, the more seed is requisite. When early sown, a bushel to the acre is believed to be sufficient; but when sown later, a bushel and a half, or more, may be necessary.' The estimate of seed, however, should be formed not so much from the capacity of any particular measure, as from the number of grains which that measure contains. The larger and fuller the seed is, the greater quantity by measure will be required; the smaller, the less quantity. Much, therefore, must be left to the discretion of the farmer, who must take into consideration the time of sowing, the quality and preparation of the soil, as well as the plumpness or the shrivelled state of the seed wheat.

If naked summer fallows are used at all, they may as well be made preparatory to a crop of wheat. It may sometimes be expedient to suspend, for one season, the raising of crops of any sort on land which is exhausted or greatly infested with weeds; and during the summer and autumn plough and harrow it several times, and thus thoroughly subdue it. When such a process is adopted, wheat is generally the succeeding crop. The custom of

naked fallowing, however, is not much approved of in modern husbandry, and that mode of preparing for wheat is rarely adopted by scientific cultivators. Sir John Sinclair says, 'the raising clean, smothering, green crops, and feeding stock with them upon the land, is not only much more profitable, as far as relates to the value of the crop substituted in lieu of a fallow, but is also a more effectual method of procuring large crops of wheat, or any other crop which may succeed the green crop.' There is a disadvantage sometimes attending fallows, which we apprehend may be more detrimental in our climate than in that of Great Britain. Land which is kept in a light and pulverized state is liable to be washed away by violent rains, and the showers of our summer season are usually more plentiful, and fall with more impetuosity, than those of England, although the mean moisture is less, and there is less rain falls in the course of the year on this than the other side of the Atlantic.

In modern tillage, wheat more usually follows clover than any other crop; and Bordley's Husbandry says, 'clover is the best preparative for a crop of wheat.' In such case, English farmers, and indeed all others who *work it right*, give but one ploughing, and harrow in the seed by passing the harrow twice in a place the same way with the furrows. Mr. Bordley directs that the operations of ploughing, harrowing and sowing, should immediately follow each other. Mr. Macro, an eminent English farmer, says, 'from upwards of twenty years' experience, I am of opinion that the best way of sowing clover lands with wheat is to *plough the land* 10 *or* 14 *days before you sow it*, that the land may have time to get dry, and after rain to make it dress well. I am at a loss to account for the *wheat thriving better on lands which have been ploughed some time*, than it does on *fresh ploughed* lands, which dress as well or better; but I have *often* tried both ways on the same lands, and always found the former answer best. Mr. Bordley in attempting to account for this effect says, 'I *conjecture* that the clover plants being buried and the wheat sown at the same time, they both ferment and run into heat in the same period: the germ then shoots, and the root is extremely delicate and tender for some days; during which the buried herbage obtains its highest degree of heat; which, added to the internal heat of the germ, may, though only slightly, check, and a little injure the delicate shoots of the wheat. In sprouting barley for making malt, a little *excess of heat* in the bed, checks, and a little more totally stops, the sprouting or growth of the roots. Both modes give crops superior to what are produced on fallow. Farmers may well try both methods for determining which to prefer; that is, as well *immediate* sowing, on ploughing in the clover, as the method of sowing not till 10 or 14 days after having ploughed in the clover; suppose an half each way.'

We believe that wheat would flourish better, if it were buried deeper than it generally is in broad-cast sowing. Our opinion is founded on the following facts, relating to the physiology of the wheat plant. 'A grain of wheat, when put into the ground at the depth of three inches, undergoes the following transformations: As soon as the farinaceous matter which envelopes the frame of the young plant, contained within it, is softened into a milky state, a germ is pushed out, and, at the bottom of that germ, small roots soon follow. The roots are gathering strength, whilst the germ, by the aid of the milky fluid, is shooting upwards; and when the milk is exhausted, the roots are in activity, and are collecting nourishment for the plant from the soil itself. This is analogous to the weaning of the young of animals, which are not abandoned by the mother till they can provide for themselves; but the care of nature does not end here: when the germ has fairly got above the surface, and become a plant, *a set of upper roots* are thrown out, close to the surface of the ground, which search all the superficial parts of the soil with the same activity as the under roots search the lower parts; and that part of the germ which separates the two sets of roots is now become a channel, through which the lower roots supply the plant with the nourishment they have collected. What an admirable contrivance to secure the prosperity of the plant! Two distinct sets of roots serve, in the first place, to fix the plant firmly in the ground, and to collect nourishment from every quarter. The upper roots are appositely situated, to receive all the nourishment that comes naturally from the atmosphere, or artificially as manure to the surface; and serve the farther purpose of being the base of new stems, which are tillered up, and so greatly increase the productiveness of the plant. The excellence of the drill-system in grain may be probably perceived in this explanation; for, in broad-cast sowing, the seeds lay very near to the surface, and in this situation it is not only more exposed to accidents arising from birds, insects, and the weather, but the two sets of roots are necessarily crowded together, so as almost to become indistinct; the plant is less firm, and has fewer purveyors collecting food for it.'*

Dr. Deane, observed, that 'wheat that is sowed in autumn, a clover-ley excepted, should, instead of harrowing, be covered with a shallow furrow, and the surface left rough. It will be less in danger of being killed by the frost in winter, and less injured by drying winds in the following spring. The furrows should be left without harrowing; for the more uneven the ground is, the more the soil will be pulverized and mellowed by the frost.' But if the crop which succeeds the wheat crop should require a smooth bottom, the land after sowing must be harrowed and should be rolled. Some husbandmen advise, when wheat is sown on a clover-ley, to plough in clover with a deep furrow, then plough in the seed wheat with a shallow furrow, and if the next crop in the rotation requires a level bottom, it will be necessary to harrow and roll the field as smooth as possible, after having ploughed in the seed.

The greatest care should be exercised with regard to the kind, quality, and preparation of seed wheat. There are many varieties of wheat, but winter wheat, in the United States, is generally distinguished by only two appellations, red wheat and white wheat, of which the latter is held in highest estimation.

In preparing your seed wheat, the first thing to be attended to is to clear it perfectly from every injurious foreign substance. 'One error here may mar our whole system, and render our skill productive of as much evil as good. On poor and worn-out land, the evil of sowing a mixture of impure seed with grain or grass seed would be great—but where the ground is in high order, the crop is more injured; the noxious plants take firmer hold, and are more difficult to be eradicated.' Indeed, it would be better for a farmer to pick over his seed wheat by single handfuls, and make a riddle of his fingers, than to sow cockle, darnel, tares, wild turnip seeds, and other vegetable nuisances, which are as intrusive as unwelcome, as tenacious of life as they are unworthy of existence. The first preparation therefore should be to screen, winnow, and riddle the grain till perfectly freed from these and other improper ingredients. When this is thoroughly accomplished, washing and steeping, for the purpose of preventing smut, should meet attention. The first step in the processes to be instituted against smut, as recommended by Sir John Sinclair, is 'to run the grain *very gently* through a riddle, when not only the smut balls, but the imperfect grains, and the seeds of weeds, will float, and may be skimmed off at pleasure.' The same author enumerates as modes by which smut may be prevented, 1. The use of pure cold water and lime. 2. Boiling water and lime. 3. Water impregnated with salt. 4. Urine pickle. 5. Ley of wood ashes. 6. A solution of arsenic. 7. A solution of blue vitriol. It seems that almost any acrid, corrosive, or poisonous application, will secure a clean crop, if properly used for that purpose.

Mr. Arthur Young sowed fourteen beds with the same wheat seed, which was black with smut. The first bed was sown with this wheat without washing, and had 377 smutty kernels. A bed sowed with seed, washed in clean water, produced 325 smutty kernels; washed in lime water, 43 ditto; washed in a ley of wood ashes, 31 ditto; washed in arsenic and salt mixture, 28 ditto; steeped in lime-water four hours, 2 ditto; steeped in ley four hours, 3 ditto; steeped in arsenic four hours, 1 do. Again, that which was steeped in ley, as before mentioned, twelve hours, had none; and that which was steeped in the same kind of ley twenty-four hours, had none; that also which was steeped twenty-four in lime water, had none; that steeped in arsenic twenty-four hours, had 5.

A correspondent of the New-England Farmer, (who is, we believe, a practical and scientific agriculturist, and whose statements are worthy of implicit confidence,) with the signature "Berkshire," in giving directions for preparing seed-wheat, observes, 'the only successful course is to prepare the seed about ten days before sowing time. This is done by selecting clean and plump seed, passing it through water in a tub, about half a bushel at a time, and washing it, and skimming off the matter that floats; then empty it into a basket to drain, then lay it on a clean floor and rake in two quarts of slacked lime and one quart of plaster to the bushel; and if too dry, sprinkle on water and continue to stir it until all is covered with the lime and plaster. In this way you may proceed until you have prepared your whole seed. Let it remain in a heap one day, then spread it and move it daily, until it becomes perfectly dry; it is then fit to sow, and you may sow it if the land should happen to be quite wet.'

We shall now speak of the liability of wheat to become winter killed. The author of Letters of Agricola states, as an objection to the cultivation of wheat in Nova Scotia, 'its liability to be thrown out in the spring, and thus subjecting the farmer to serious inconveniences, and often disappointment of a crop. Grasses are not exempt from the same hazard; and the hopes of the year are thus blasted by a cause, which, in many cases, will admit of remedy—in all, of alleviation. I am not sure, but sowing the wheat seed under furrow, at least four or five inches deep in September, in order that it may extend its roots and take a firm hold of the soil before the approach of winter, and rolling it in the spring with the box heavily loaded, would obviate the evils of our climate, and enable us to cultivate that grain according to the improved modes of England. It ought to be recollected that even there, about sixty years ago, winter wheat was not of general cultivation, and the heaving of the soil was accounted a powerful obstacle to its success. In Scotland, too, during the same period, spring wheat almost universally prevailed; and her northern and bleak position was thought to be incapable of any change to the better, and utterly unfriendly to autumnal semination. The zeal and industry of British farmers, combined with their skill, have baffled all these gloomy predictions, and taught us at once to copy the examples of our sires, and not to despair in the race of improvement.'

A method, according to the same author, made use of in Norfolk, England, to guard wheat against the changes and inclemency of winter and spring, is to adopt the following rotation. 'After a turnip crop, they sow barley the second year with clover seeds; the third year they cut hay, and plough down the ley, and sow their winter wheat on the matted sod. The roots of the grass bind the soil, and prevent it from heaving, which is much akin to the same effect produced by the tangled and bound surface of our new and cleared lands.' This fact may suggest another inducement to sow wheat next in rotation after clover, as has been recommended.

* Mr. Featherstonhaugh's Essay on the Principles and Practice of Rural Economy.

It is well known that our lands, where the soil is at all suitable, will produce good crops of wheat when first cleared from their native growth of wood; but after having been tilled for some years, they generally yield wheat with difficulty, and it is often found impossible to raise it by any of the modes commonly adopted for wheat culture. In most parts of Massachusetts, and in some parts of New Hampshire and Vermont, the farmers scarcely ever attempt to raise wheat, and still more rarely succeed when they do attempt it. Yet, we believe wheat was a common and profitable crop in those places in the early period of their settlement. In process of time, however, the land became exhausted of its wheat-bearing faculty, and our farmers were forced nearly to forego its cultivation. The same variations and appearances have likewise been observed in Europe. Wheat countries, by continued cultivation, have become almost incapable of yielding wheat. The cause and remedy of this partial barrenness, this falling off, with regard to particular plants, was alike involved in obscurity, till modern discoveries in chemistry threw light on the subject. It has been found that the texture of every soil is defective unless there is a mixture of three kinds of earth, viz., clay, sand, and *lime*—and that lime, in some of its combinations, exists in wheat, both in the straw and kernel. In some soils, fertile in other respects, lime may either have no existence, or be found in very minute portions, and be soon exhausted. If lime be a necessary constituent of wheat, and is not in the soil where we attempt to raise wheat, it must be supplied by art, or wheat will not grow. Or if native lime exists in the soil, in small quantities, the land may bear wheat till the lime is exhausted, and then become incapable of producing that plant, till a fresh supply of lime, marle, pulverized bones, or some other calcareous substance, is added. Mr. Young says, (Letters of Agricola, p. 299,) 'it cannot be denied, that since the plentiful use of lime has been adopted, lands in Europe will produce wheat which otherwise were incapable of bearing,' and quotes several instances in proof of this assertion. Dr. Anderson likewise gives an account of a field, which had a top-dressing of lime for the purpose of raising wheat, but the lime, by accident, was not applied to a small patch of the field, and in that patch there was no crop, while every part of the field to which the lime was applied produced wheat luxuriantly. It would be easy to adduce many more instances to prove that lime, in Great Britain, is considered not only useful, but indispensable for the production of wheat. A British farmer, we believe, rarely undertakes to raise wheat *without* the use of lime, and an American farmer as rarely undertakes to raise it *with* the use of that substance for manure.

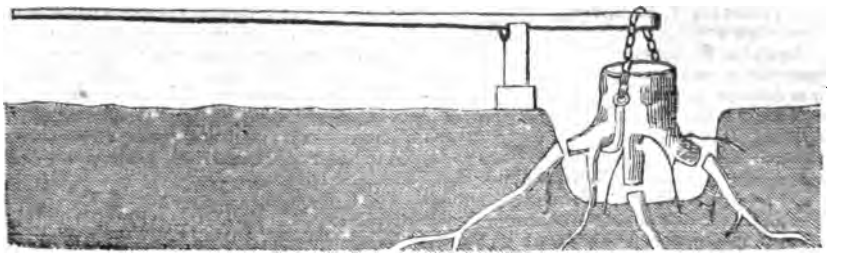
If the foregoing premises are correct, it would seem not impossible, and indeed scarcely improbable, that by the judicious use of lime, or other calcareous substances, wheat may be as well raised in New England as in the Western States. The subject is certainly of very great importance, and deserves repeated experiments.

The remedies against rust, or mildew, according to Sir John Sinclair, are as follows:

1. Cultivating hardy sorts of wheat.
2. Early sowing.
3. Raising early varieties.
4. Thick sowing.
5. Changes of seed.
6. Consolidating the soil.
7. Using saline manures.
8. Improving the course of crops; and
9. Extirpating all plants that are receptacles of rust.
10. Protecting the wheat plants by rye, tares, and other crops. The above remedies are enlarged upon by Sir John Sinclair, in "The Code of Agriculture," but his observations are too voluminous to quote at large in this place.

[The Complete Farmer.]

The official report of the number of deaths in the city of Augusta, Geo. was only *nine* for the month ending the 31st of July.



Practical Hints to Emigrants on the Clearing of Lands. By Wm. Reed. [From the London Mechanics' Magazine.]

Sir,—One of your correspondents, some time back, recommended circular saws for cutting timber or trees down, the saws to be about four feet in diameter! You published also an account of some machines for horizontal cutting, patronised by the Highland Society of Scotland. Now, sir, I have some circular saws of thirty inches in diameter, and these are the largest I ever saw. We make no use of them, however, having no power to spare for driving them. They were made in London, and cost more than ten guineas each, which, considering the difficulty of making them, and that many are spoiled through cracks or flaws in the hardening, was not dear; but as for saws of four feet diameter, it is not likely they could be made, or used when made, as even sixteen-inch saws soon heat and buckle. Supposing, however, these difficulties were got over, how can poor colonists, some with not £5 in their pocket, be expected to lay out ten guineas, or more, for sawing machines? People, with guineas to spare, go not abroad to fell woods. The men that do go are the poor and needy, who, if they would thrive, must work hard, and not stand upon trifles. There must be no staying for this or that; they must make the best shift they can with what comes readiest to their hands. To illustrate what I have said about circular saws, take the following example: When, in 1803, the Golden lane subscription brewery was set on foot, an old shopmate of mine, of the name of Green, was employed there as millwright. Having occasion for some thin deals, but none being at hand, he thought, as he had a two-feet circular saw running, and plenty of three-inch deals, that if they put two cuts through one of these three-inch deals, they would have what was wanted. Accordingly, he and another man set the saw to work, laying on all the power of the engine, which was one of twelve or sixteen horse power; but they found that if they pushed the deal ever so little too fast, it completely stopped the engine. Now, if cutting a three-inch deal with a two-feet saw stops a twelve horse engine, how will two poor men work a four-feet circular saw? No, my emigrant friends, if you have the means of taking out a few tools with you, let them be of the simplest and cheapest sort, such as a good axe, a hand-saw, a cross-cut saw, (for if two men or families unite, they may cross-cut a tree down in less time than by chopping,) a spade, with pick-axe and crow-bar, gimblets, nails, two or three augers, mortice chisels, &c. not forgetting that most useful of all tools, a grind-stone, and two or three triangular files (*vulgo*, three-square,) for sharpening your saws, or they will soon be as useless as a gun without a lock or flint. No time the first year to grub up roots; enough to do to raise, with spade labor, a crop of potatoes, corn, &c. Let the roots rot, or try to burn them in their places, as I have seen German colonists do. When time admits, the following very simple mode of extraction may be adopted. After removing the earth from around the main stump, and cutting the principal branching roots quite through, take a long slender tree, like a scaffolding pole, such as two persons can lift, as a lever; hang two strong hooks with a bit of chain cable, from the short end of this lever; attach these hooks to the under end of the stump; place an upright support at a little distance from the stump, to serve as a fulcrum, (all as represented in the prefixed rough sketch,) and then pull away at the lever with all your might. This will be found a far more simple method than any of the expensive ones recommended by the Highland Society, or others, and, I doubt not, equally efficient. It would be as well, however, to consider before cutting some trees down, whether the tree itself might not be made a lever of to extract the roots. Fir trees, and several others, project their roots but a little way from the surface of the ground, so that by digging a little round the roots, and cutting through the large fibres, many might be pulled down by means of a rope fastened to the top.

I hope some of your more able correspondents will pursue the subject; for when the poor emigrant is far away from help, things do not always turn up so pleasantly as they did with that prince of colonists, Robinson Crusoe.

I am, sir, your obedient servant,

Wm. Reed.

Peterhoff Paper-Mill, near St. Petersburgh, Jan. 1834.

New Cement.—The late conquest of Algiers by the French has made known a cement used in the public works of that city. It is composed of two parts of ashes, three of clay, and one of sand. This composition, called by the Moors *Fabbi*, being again mixed with oil, resists the inclemencies of the weather better than marble itself.—[Beija Flor.]

Potatoes.—Potatoes planted at one foot deep produced shoots at the end of the spring; at two feet, not till the middle of the summer; at three feet, their roots were very short, and did not come to the surface; below three feet, they never vegetated. Several were buried in a garden at 3½ feet, and after two years were found without any germination, but with their original freshness, firmness, and proper taste.—[Ann. Soc. Agr. Fr. 1829.]

Vegetable Food from a Given Space.—Humboldt calculates that 1000 square feet of banana plants will produce 4000 lbs. of nutritive fruit; while the same space would only grow 33 lbs. of wheat and 99 lbs. of potatoes.

Venomous Animals.—It is a curious distinction of these animals, which has been lately made, that all the species of serpents of which the young are hatched within the mother, and which are therefore born alive, are venomous. This seems to be more certain than the converse of the rule, that all oviparous serpents are not injurious.

[*From the N. Y. Mirror.*]

OBSERVATIONS ON THE AVON MINERAL WATERS.

By John W. Francis, M. D.

The experiments and observations which have been made at different periods by various writers on the mineral waters of the United States, if properly grouped together, would constitute a work of great practical utility. This service has indeed been performed, to a considerable extent, by Dr. Bell, of Philadelphia, and a large amount of information on this interesting subject, which was scattered through numerous volumes, may be found in his work on Baths and Mineral Waters.

Among the earliest papers which have appeared, of this nature, may be mentioned an Analysis of the chalybeate waters of Bristol, Pennsylvania, by the late Dr. John De Normandie, of that place, and printed in the first volume of the Transactions of the American Philosophical Society. The investigations of this learned physician, though wanting in the philosophy of modern chemistry, were such as to awaken much public attention to the Bristol waters; and some sixty years ago they were deemed to possess properties analogous to those of Bath and Spa: they were at that time largely employed for their curative powers, but have latterly fallen into disuse. So early as about 1789, Dr. Mitchill, of New York, instituted his series of experiments on the waters of Saratoga Springs, and subsequently added many pertinent observations on their medicinal qualities. These waters, with those adjacent, at Ballston, are now so universally known to both hemispheres,‖ and so extensively had recourse to, that little more need be said in this place than to recommend the reader, for the fullest details of chemical analysis and of practical nature, to the recent work of Dr. Steele. So ample has been the experience of different medical observers concerning the active properties of these waters in various disorders, that the principles for their exhibition formerly urged with such earnestness, seem at the present day the less requisite.—Yet caution against the popular error of indulging in their use to excess, must still be enforced, as the soundest principles of art are often set at naught by the preposterous indulgence, which some allow themselves, when they resort to the springs. These waters are designated *acidulous saline chalybeates.*

The Schugl's Hills, or *Schooley's Mountain* water, deserves also to be here noticed. The water of this mineral spring is said to have been known to the aborigines, and to have been employed by them as a remarkable remedy, which they concealed from the whites. Be this as it may: the Schooley's Mountain water is situated in Washington township, nineteen miles north-west of Morristown, and fifty miles from the city of New York. The chemical analysis of it made by Professor Macneven, my late colleague in Rutgers Medical college, furnishes an admirable specimen of this species of philosophical investigation; and were the products of other salubrious medicinal springs, within the United States, examined with a like minuteness and accuracy, we should have little cause to lament our present imperfect knowledge of this class of products with which our country is so largely enriched. I may be pardoned for dwelling for a moment longer on this water. Schooley's Mountain, by geometrical measurement, has been ascertained to be more than 600 feet in height, above its immediate base. Dr. Mitchill calculates, by approximation on the falls of water at different mill-dams along the hurrying channel of the Musconetchunk to its junction with the Delaware, and on the descent thence to Trenton, that the base itself is five hundred feet more above tide water.*

This mineral spring issues from the perpendicular side of a steep rock, about forty or fifty feet above the level of a brook that gurgles over a rocky bottom, within a few paces of it. The spring discharges a gallon in about two minutes and a half, and the quantity is not observed to vary under any change of season or weather. Its temperature, at its issue from the rock, was found to be 52 degrees of Fahrenheit. The bare taste and appearance show that it is a chalybeate: and it is strongly characterized by the peculiar astringency and savour of ferruginous impregnations. The iron is easily separated from the mineral water: its carbonic acid is altogether in a state of combination, and hence it never occasions flatulence, while it proves a corroborant to feeble digestive powers. Hence it is recommended in many chronic diseases and general debility, and especially in calculus and affections of the kidney and bladder. In an instructive case which Dr. Macneven has recorded, the patient took from fifteen to twenty half pint tumblers a day, with most decided benefit; and he informs me, that other examples of its salutary action in other disorders have come within his knowledge and observation.

The following are the results of Dr. Macneven's analysis:

Vegetable extract, 92; muriate of soda, 43; muriate of lime, 2.40; muriate of magnesia, 50; carbonate of lime, 7.90; sulphate of lime, 65; carbonate of magnesia, 40; silex, 80; carbonate oxide of iron, 2; loss, 41=16.50.†

The *White Sulphur* springs of Virginia have long enjoyed a distinguished reputation, and are resorted to at the present day, as formerly, by numerous invalids, suffering from disorders of the digestive organs, chronic affections of the liver, the sequelæ of protracted intermittent and remittent fevers, the derangements induced by the preposterous use of mercurials, cutaneous diseases, certain female complaints, &c. &c. Where these various disorders are unconnected with inflammatory symptoms, they are pronounced to be of the greatest efficacy. So far as my acquaintance with these waters extends, it coincides with that of the most favorable opinion given in their behalf. Their action on the skin is of singular efficacy and importance. They are somewhat more exciting than ordinary saline sulphureous water.—The reproach, long ago made, still holds just, that they have not received the attention they merit, as objects of rigid chemical investigation. Dr. Bell's work, already referred to, contains the best exposition I have seen of their composition and remedial qualities. A Virginian is to be excused in lauding, in no common phrase, the white sulphur springs; the facts in the case warrant it; and moreover, in so doing, he only follows his political apostle, Mr. Jefferson.‡

Kentucky boasts of numerous mineral springs of a sulphureous class. Dr. Drake, of Cincinnati, considers those of the Big Bone Spring, or *Salines*, and the Olympian Springs, as the most noted. The water of the Big Bone Spring, he affirms, contains sulphuretted hydrogen in large quantities; and holds in solution the muriates of soda and lime, and the sulphates of soda or of magnesia. The disorders to which Dr. Drake thinks it more peculiarly adapted, are the torpor, obstruction or chronic inflammation produced by acute diseases of the lungs, liver, spleen, kidneys, in short, any of the viscera, and which have continued so long that the constitution is exhausted. In these cases, experience has shown them to possess all the efficacy that could be expected in any mineral waters. From a pint to a gallon may be taken, according to the strength of the patient, and its sensible effects on the system. The quantity drank at first should be small, especially by those of reduced habits. These waters do not increase the pulse, but their sensible effects on the alimentary system, kidneys, and skin, are great. The action of the former is very much increased, and the latter is frequently affected in a few days with a violent itching, and an eruption of pimples or pustules, which are now and then connected with large biles.

With these cursory remarks on some of the mineral waters of the United States, we may be the better enabled to estimate the composition and peculiar properties of the *Sulphur Springs of Avon.* Had the work of Dr. Bell§ included any account of these waters, I would have forborne to offer the present imperfect observations on the subject; the more so, as I am still engaged in a series of chemical inquiries, to determine more precisely their respective ingredients, assisted by my friend, Dr. Ellet, the late professor of chemistry in Columbia College.

The Avon springs are situated in Livingston county, within a mile of the village of Avon. The village is on the bank of the Genesee river, and is passed through by the great western road from Albany to Buffalo. The soil in its vicinity is of the richest and most productive quality, yielding the cultivator a full reward for his labor; that of the flats, as they are popularly called, consists entirely of alluvial deposit, while the table-land presents all the varieties of calcareous and argillaceous mould. The sensibilities of the valetudinarian may here cherish to satiety the beauties of Avon scenery, and the botanist find the richest materials for enlarging his herbarium.

The Avon springs seem to have been partially known to the Seneca tribe of Indians, who, until within a few years, inhabited a village on the opposite bank of the river, which they called Canawagus. The far-famed chief, *Red Jacket*, enumerated them among his remedial measures for the cure of disorders of the skin; and *wasting disorders*, as they were termed, were supposed capable of being removed by their use, even applied externally.*—They may now justly be deemed conspicuous among the mineral waters of the State of New York.—They at present comprise two springs, within about forty-two rods of each other, and are somewhat less than one-third of a mile from the Genesee river; they issue from the foot or base of the highlands that border its low grounds. They are denominated the lower and upper springs; while the former has been for several years known, the latter is but recently, and is preferred by some. I first became personally acquainted with them in the summer of 1827, when they were frequented by a number of infirm visiters, and renewed my visit to them in 1829, with increased confidence in their powers. Professor Hadley has lately published an analysis of the upper spring, which seems to have been made with a good deal of accuracy. According to his analysis, one gallon of the water contains carbonic acid, 5.6 cubic inches; sulphuretted hydrogen gas, twelve cubic inches; carbonate of lime, eight grains; sulphate of lime, eighty-four grains; sulphate of magnesia, ten grains; muriate of soda, 18.4 grains; sulphate of soda, sixteen grains; and a small quantity of other matter. According to Dr. Salisbury, a resident at Avon, the weight of the constituents of the water of the *lower* spring are as follows; arranged so as to form compounds existing in the water, and calculated for ten thousand parts by weight, are

Carbonate of lime	5.02	
United to carbonic acid	1.70	
		6.72
Chloride of calcium		1.44
Sulphate of lime		9.83
Sulphate of magnesia		8.49
Sulphate of soda		2.35
		28.83

By volume of 10,000 are	
Hydro-sulphuric acid	4.34
Nitrogen	2.35
Oxygen	25
	6.94

Dr. Salisbury adds, the chlorine assigned to calcium, as the chloride of calcium, is often found in those waters which contain but little saline matter. There remains 00.6 of sulphuric acid, apparently in excess, which is accounted for by the difficulty of separating, accurately, magnesia, from the other salts. The quantity of carbonate of lime exceeds the equivalent quantity of carbonic acid necessary to render it soluble in pure water; and this fact affords a probable explanation of the character this water exhibits when tested by colored paper.

‖ See Hosack's Essays;—Dyckman, Edinburgh Dispensatory.

* Bruce's Mineralogical Journal. † Transactions of Literary and Philosophical Society of New York, vol. 1. ‡ See Notes on Virginia. § See Bell on Baths and Mineral Waters, p. 436-7.

† See Gairdner on Mineral and Thermal Springs. Very generally associated with iodine, says Dr. Gairdner, is the congenerate substance, bromine.—Balard first discovered it in sea-water, and subsequently it has been detected in several saline springs; it exists almost always as a hydro-bromate of magnesia.

* Doubtless this term, *wasting disorders*, included many physical infirmities, whose pathognomic features greatly differed, and many other different sorts of pulmonary disorganization. Dr. Rush declares that pulmonary consumption is wholly unknown to the North American Indians. It is generally admitted that in countries where fever and agues prevail, consumption is of rare occurrence. The Rev. Dr. Dwight (*Travels*) also makes this observation in particular reference to the great western country; and it is sufficiently proved that intermittent fever constitutes a great outlet to the lives of our aborigines. But the declaration of Dr. Rush is not tenable. Hunter, (*Diseases of the Indians, New York Med. and Phy. Journal,*) who may be deemed good authority on the subject, remarks, that pulmonary consumption among the North American Indians is established by too many familiar facts. The celebrated chief, Red Jacket, in an interview I had with him at his Reservation, near Buffalo, in September, 1823, gave the particulars of the cases of no less than seventeen of his relatives, (including, I think, ten or eleven of his own children,) who had died of pulmonary consumption. He was quite descriptive in his statement, and seemed sufficiently qualified to make a number of very fair distinctions in relation to the matter. This digression from our more immediate subject will probably be excused, on account of the curious character of the facts which it records.

The volume of water discharged from this spring, Dr. Salisbury further remarks, is the same at all seasons of the year, and does not appear to depend in the least upon atmospheric influence; as nearly as can be ascertained, under existing circumstances, it is fifty-four gallons in a minute. The temperature of the water is invariably forty-five degrees Fahrenheit. The specific gravity, 10.018. As it issues from the spring it is very limpid and somewhat sparkling.

The analysis of these waters, which I caused to be made about two years ago, did not afford satisfactory evidence of either containing iodine.—Nevertheless, a strong probability is, that both iodine and bromine enter into their constitution. Dr. Usher, of New-York, and Dr. Steele, of Saratoga, have lately found iodine in the congress water at Saratoga; Dr. Steele has discovered a trace of bromine, the hydro-bromite of potash, in the water of Hamilton spring. It is well known that iodine exists but in the smallest quantity in the waters in which it has, as yet, been discovered; and that in waters which have been repeatedly and carefully analyzed, it has escaped detection. This occurrence took place with the saline springs of Sales, in Piedmont, from which, so recently as in 1820, M. Angelina procured iodine. There are good reasons to suppose that waters so amply impregnated with sulphureous matter as those of Avon springs, may contain both iodine and bromine.†

The value of these waters has, within the last three or four years, been justly and highly appreciated, and induced numerous valetudinarians to partake of them. They may be ranked among the most powerful and remedial waters yet made known; but, like other active medicinal agents of a similar character, they are liable to great abuse, and in certain states of the system may prove seriously detrimental. Possessing active emetic and cathartic properties, particularly the waters of the spring last discovered, it is requisite that caution be exercised not to indulge in them too freely at first; and as they are more or less exciting, they also demand that previous to commencing their use, the system should, in many cases at least, be first relieved by the employment of some efficient cathartic. This precaution is of saving importance, and I have known a disregard to it to lead to almost entire disappointment in anticipated benefit for many weeks; while, on the contrary, the general powers of the system being relieved by antiphlogistic and aperient means, the waters have often accomplished all that could be desired, within a comparatively short period. As in the administration of all sulphureous waters, so also those of Avon should be closely watched, and their use, for a while, suspended, when febrile irritation, or undue local determinations occur. This is most apt to take place in habits preternaturally full, or when local inflammation exists: where a congested condition of the viscera happens, their best adjuvants are mild mercurials, or saline cathartics.

In disorders of the digestive organs, arising from torpor of the primæ viæ, hepatic obstructions, and affections of the glandular system; in rheumatism and gout, and in many of the most formidable of cutaneous affections, in tinea capitis, these waters have secured the confidence of those who had previously suffered to the severest degree from these maladies. In many forms of ill-conditioned ulcers, their utility as a wash is abundantly manifest: while the invalid uses them internally, he may, at the same time, have recourse to them for some twenty or thirty minutes, on alternate days, in the form of a warm bath, the temperature of which may vary from 96 to 98 degrees Fahrenheit.

By many who have profited largely from the use of Avon waters, in chronic affections, their employment, by means of bathing, has been urged emphatically, as superior to any other method of using them. If it be thought that, like some sulphureous waters, they, by their long-continued action, greatly diminish strength, this objection loses its validity when we limit their use to the form of bathing. But, so far as concerns the Avon waters, I have never been apprised of an example, that could be fairly cited, of their debilitating influence. On the contrary, under circumstances the most discouraging, they have demonstrated their renovating capacity. In venous plethora, and in chronic congestion, when the constitutional powers are much impaired, to the relief obtained by mild aperients, the warm sulphur bath cannot but prove an admirable auxiliary. Few chronic diseases are combated, even by the most dexterous, with the prospect of an immediate healthful change; yet these waters claim properties which inspire us with the hope that some of the severest and most obstinate forms of disordered action, such, for example, as involve a disturbed circulation, as occurs in angina pectoris, and in hypertrophy of the heart, may be steadily and gradually subdued by their salutary operation.

Corpulence, which is not only a disease in itself, but is often the precursor of other disorders, may, from the remarkable action which the Avon waters induce, have its morbid fulness diminished, the evils inseparable from obesity gradually obviated, the muscular system strengthened, and health, and a becoming symmetry, restored. I here mention these waters for their depurative effects, as only one of the means calculated to carry off a super-secretion of adipose material, without being followed by marasmus or other detrimental results, as some remedies urged for this purpose in occasional instances produce. But, after all, the reproach which the poet casts on the inefficacy of medicine in these cases, may, with equal truth, sometimes apply to the Avon waters, though aided by the most judicious choice of aliment.

"How can a magic box of pills,
Syrup, or vegetable juice,
Eradicate, at once, those ills
Which years of luxury produce?"

In pulmonary disorders their beneficial agency is not yet confirmed, and further experience must determine their merits: if employed, their use is to be regulated by the nicest precepts of the healing art, inasmuch as these waters are eminently calculated to produce powerful changes on the system by their active operation. In the incipient and active stage of pulmonary irritation, it becomes our duty to precede their employment by venesection, and the other customary means of depletion, analogous to the practice we have recourse to with the Ballston or Congress waters. The same observation applies to hemoptysis, to acute disorders of the digestive organs, liver, and other viscera. The direful consequents which inevitably occur in such cases, from the Saratoga waters, when these cautions are not heeded, are too painfully known to be dwelt upon in this place.

In several forms of female disease, the Avon waters can be safely and efficaciously recommended.—In chlorosis, and in certain complaints mainly depending on weakness, after a judicious course of preparatives, such as a careful clinical observer would enforce, these waters present themselves vested with sanative powers. Aware of the Protean character of constitutional disease depending upon uterine irritation, and chronic affections of that organ, I have no doubt that future investigation will demonstrate that the Avon waters possess many advantages over chalybeates in cases of this nature. I would extend the same remark to the complex affections connected with ovarian disease, and to several of the morbid manifestations which presented themselves in advanced life.

I have for several years past recommended the Avon waters; to those of the lower spring I give the preference: they have proved available in the severest cases of rheumatism and gout, and in some affections of the urinary organs. Clinical observation has enabled us to affirm, that few disorders of a constitutional origin are more perplexing in their diagnostic character than the maladies arising from long persistence in errors of diet: from this, among other sources, the digestive functions become enfeebled or broken up, and the irritations of impaired digestion, associated with the undue secretion of uric acid in various forms, lead to the production of gout, gravel, and other formidable and agonizing derangements of the kidney and urinary functions.

In cases of this sort, Dr. McLean and others of enlarged experience have testified to the eminent usefulness of the Saratoga waters; and I believe it will be found that those of Avon possess merits of a similar quality, if not of a higher degree. It behooves us, however, previously to relieve the system, by unlocking the several emunctories, to abate inordinate action, and regulate the habits of the sufferer: for even of waters so comparatively feeble as the Bath waters, England, it is said by Dr. Parry, that they are in no form whatever beneficial, during the paroxysm of gout, or in any inflammatory disposition which may exist in the interval.

After the preliminary management of the case by depletory means, and appropriate alvine aperients, the use of the water of Avon for a few days, or perhaps weeks, has wrought an alteration the most gratifying evinced by improved appetite, increase of flesh, and invigorated health; and while the body receives the impress and partakes of all the advantages of increased physical energy, a corresponding improvement marks the capacity of the intellectual powers. When taken internally, the Avon waters prove cathartic, diuretic, diaphoretic, and tonic.—They thus constitute an effective alterative; and inasmuch as their tonic properties are the results of their general influence on all the emunctories of the body, particularly those of the cutaneous and urinary functions, they claim to themselves qualities which are denied to the entire class of tonics and stimulants strictly so called, and the mischief invariably induced by these last-named articles, wherever local congestion exists, are entirely guarded against by the waters of Avon.

Their manifestations on the surface are conspicuous. I am not able to say from experience that in this respect they surpass or even equal, the white sulphur waters of Virginia; but am scarcely ready to believe that these last fairly boast of a superiority in their action on the skin. Their extraordinary alterative effects must unquestionably be greatly owing to the action they induce by the cutaneous secretions.

As a striking example of their alterative influence on the cutaneous surface, I may mention the case of an individual, now in the 22d year of his age, incommoded by congenial ichthyosis, and whom I recommended to repair to these springs last season. The free use of these waters, internally and by bathing, for some ten weeks, so effectually removed this morbid alteration of the skin, as in divers parts to leave no trace of the previous existence of disfiguration.

In speaking of the constitutional influence of the Avon water, Dr. Salisbury, who has had much experience with them during a residence at the springs for four summers, has the following remarks: "The operation of Avon water upon the human constitution is modified by the quantity drank in the time given, and by the constitution, habit and disease of the individual. Generally speaking, four or six half pint tumblers of the water, drank during the day, produce a mild cathartic effect, and under its long continued exhibition to this extent, no debility ensues, but, on the contrary, the appetite and strength are very much increased. In very large doses, as from ten to fifteen tumblers a day, it operates powerfully upon the bowels, kidneys, and skin. A moderate use of this water, persevered in for a considerable length of time, will insure to it a powerfully alterative effect in cases where there is no acute inflammation."

A judicious mode of commencing the use of the Avon water, is to take six or seven half-pint tumblers during the twenty four hours: a couple of tumblers may be advantageously drunk before breakfast, and some two or three hours after that meal the same quantity may again be taken, and an additional tumbler-full or two in the afternoon. To the sense of smell they present the usual properties of sulphuretted hydrogen gas; but in a very small degree: they are nowise oppressive to the digestive organs. Some however take them in larger quantity, and oftener repeat the draught. Others, again, never use them until after the first meal. Like the Ballston and Saratoga waters, they are sometimes drunk to a most pernicious extent. It is expedient, therefore, in all cases, to regulate their administration by their immediate effects; and every regard must be paid to age, sex, disease, constitution, and individual peculiarity. To guard against undue local determination, either cerebral, thoracic, or visceral, will always become a matter of professional duty.

All observations of a dietetical character are here designedly forborne: and I need scarcely add, that, with these precautions, the Avon waters may, in numerous cases, command the praises both of the patient and prescriber. Moreover, as these waters are armed with such potent qualities, their influence on the system must be either prejudicial or beneficial; and they demand, in all cases, the advice of the physician.

Ninety Years.—Ninety years hence not a single man or woman now twenty years of age will be alvie. Ninety years! alas how many of the lively actors at present on the stage of life will make their exit long ere ninety years! What are they! "A tale that is told"—a dream; an empty sound that passes on the wings of the wind away and is forgotten. Years shorten as man advances in age; like the degrees in longitude, man's life declines as he travels toward the frozen pole, until it dwindles to a point and vanishes forever. Is it possible that life is of so short duration! Will ninety years erase all the golden names over the doors in the town and country, and substitute others in their stead! Will all the now blooming beauties fade and disappear, all the pride and passion, the love, hope and joy pass away in ninety years, and be forgotten? "Ninety years?" says Death, "Do you think I shall wait ninety years? Behold to-day and to-morrow and one is mine. When ninety years are past, this generation will have mingled with the dust, and be remembered not."—[Thomaston Journal.]

FOREIGN INTELLIGENCE.

LATER FROM EUROPE.—The Europe, arrived last Sunday from Liverpool, brings Liverpool dates of the 17th ult.

The resignation of Lord Grey is the chief topic of interest made known by this arrival. This event was brought about by the attempt of ministers to re-enact, without alteration, the Irish Coercion Bill; concerning the policy of which measure the Marquis of Wellesley, Lord Lieutenant of Ireland, and some of Lord Grey's own cabinet dissented from the Premier. Hence the resignation. Lord Althorp, though he too resigned, had agreed, it is said, to resume his place; the Lord Chancellor, too, preserves his. The reconstruction of the Ministry had not been accomplished at the last dates. It will be a work of difficulty; and even when accomplished, of short duration, or we much mistake the signs of the times in Englrnd.

We give the rumor of the escape from England of Don Carlos, and of his having reached the north of Spain, to head the insurrection there. We attach no credit to it, chiefly because when this same pretender was on the borders of Spain, and had ample chance, if he had dared to use it, of putting himself at the head of the insurgents and conquering, or dying for, the throne he claims—he skulked about from hiding place to hiding place, and never faced the day.

LIVERPOOL, 6 P. M. JULY 16,—The Standard, on the authority of their Paris correspondent, announces the arrival of Don Carlos in Spain. He reached Bayonne on the 8th inst., and on the following day entered Spain, where he is stated to have been extremely well received by the people. What effect this interference may have upon the contest now going on in that unhappy country, it is impossible to foretell.

Baron de Haber has been charged by Don Carlos to contract a letter of 125 Million of Francs, or 5 Million Pounds sterling, which he has succeeded in effecting with one of the first houses in Paris. Besides the misery of the civil war raging in Spain, dreadful storms are devastating the North, and the Cholera is raging unchecked in the South.

The arrangements of the new Ministry may be said to be completed. The changes will be few.—Lord Melbourne's removal from the Home Office will, it is said, make room for Lord Duncannon, who will fill the situation hitherto held by the Premier.—It is also rumored that Lord Durham is going to Ireland in the capacity of Lord Lieutenant, and Mr. Tennyson has been named his secretary.

The new arrangements are said to be very annoying to Lord Brougham, who is stated to have resigned the Seals and gone down to Windsor, to have an audience with the King. The general impression is that the new Cabinet is not composed of materials of an enduring quality. A Cabinet Council was held last night, Lord Melbourne immediately proceeded to Windsor, to wait upon his majesty. The Funds remain steady.

FRANCE.—The recent elections give the ministers about 320 votes, the opposition about 90, and leave 50 whose sentiments are undecided. The ministerial majority may therefore be calculated at three to one. In the late Chamber the strength of the ministers was usually 250, that of the opposition 150, whilst from 40 to 50 members fluctuated between the two parties. The Carlists have only returned about a dozen of their friends, and the republicans are even less successful having failed everywhere.

LATER FROM FRANCE.—By the ship Florida, Capt. Mauran, we have Havre papers to July 15, and Paris to the evening of the 14th.

French steamers now transport the mail between Calais and Dover.

The Cholera is in Gibraltar.

The health of Don Pedro creates anxiety. Letters from Lisbon dated July 1st, state that he was suffering severely in consequence of a fall from his horse in Brazil. The fatigues of the last two years have undoubtedly enfeebled him. The Duke of Palmella has had several conferences with the Ministers on the subject of the proper persons to constitute a Regency, in case the health of Don Pedro should become such as to disable him.

A terrible fire occurred at Smyrna on the 3d June; about 60 of the finest houses, built in the European style, with an immense number of warehouses, were reduced to ashes.

PARIS, JULY 15.—The news of the arrival of Don Carlos in Spain, though doubted by a great number of persons, has had a depressing effect on our funds, and still more on the *rentes perpetuelles* of Spain, which, after opening at 66 closed at 64.

The news from Madrid of the 4th inst. is to the following effect:—"The cholera is almost exclusively the object of attention here. This terrible malady which still continues its ravages in the south of Spain, has at length made its appearance in the capital, where, however, it is as yet confined to the hospitals. The cases said to have happened in private are doubtful. The disease, both at Madrid and Balleeca, a village one league from the capital, where the great number of sick are, shows itself in a mild form; but little reliance is placed upon this circumstance, as it also at first appeared under a mild form in the town of Andalusia, where the mortality has since been so considerable."

"The Infant Don Francisco has remained at Madrid with his family. It is said that he is going to St. Ildefenso, after a short quarantine at the Escurial. The French Ambassador set out this morning for the roval residence, whence he will probably return for the opening of the Cortes, which is to take place, unless a counter-order should be issued, on the 24th inst. The electrons known up to this day are all constitutional, and there is no fear of the remainder overstepping that limit. Count Toren has been elected at Cuenca, and will be so most likely in the Asturias, his native province.

LATER.—By the Birmingham, from Liverpool, papers are received from London of 16th ult.; one day, or rather night, later than before; for we had the Courier of the afternoon of 15th.

[*From the London Times.*]

LONDON, WEDNESDAY, JULY 16.—Nothing has occurred, or at least transpired, to shed any more light upon the progress of the new Ministry, or on the prospects of the country, than what we have already communicated.

There is no fear of a Coalition Ministry, because all parties have too much sense to coalesce, for the mere purpose of flying asunder on the introduction of the first important public measure. We are under very little alarm about the Tory Ministry, because the leading Tories know at length the feeling towards them entertained by the great bulk of their countrymen. The extreme radicals are much beyond the pale of possibility as the the Conservatives themselves. What them remains but an Administration of rational and enlightened, but resolute and energetic Reformers, who will employ the machinery of the Reform Bill for the correction of real and sensible evils, in the same spirit as that which has gradually through the growth of ages been directing the discoveries of general science to an improvement of the arts of life, and to a practical extension of human happiness?

If the Government now under process of creation by Lord Melbourne be not adapted to its end, viz. the promotion of tangible and definite reforms—the people have now in their hands the power to get rid of it, and they will do so without hesitation.

Our readers perhaps will concur with us in feeling that after what has already passed, we do not call upon them for any loud note of exultation, when we announce the probability that, such as it is, the Melbourne Cabinet has by this time been completed—that the vessel is almost ready for launching—the last nail having been driven; would that we could add that the last *block* has been knocked away from under her. Lord Melbourne, as will be seen from the Court Circular, had a long audience of the Sovereign yesterday at Windsor, and his Majesty comes to St. James's Palace this day, to receive, as is supposed, the homage of his new-old-Ministers. What a fright they must have been in,—some half dozen of these lords and gentlemen!—and what an escape they have had! We wish we could say as much for the country. However, Lord Melbourne is a man of spirit, honor, and understanding, and it is but a feeble expression of our good feeling towards him to wish him safe and well through his arduous task.

As the arrangements cannot be considered complete till they receive to-day the sanction of the King, who will on coming to town give his final decision, we shall forbear to state anything beyond our belief that Lord Duncannon is to be the Secretary for the Home Department.

Money Market and City Intelligence—Tuesday Evening.—The Consol market opened firmly this morning at 92 7-8 to 93 for the account, but underwent a slight depression afterwards, chiefly on account of the great agitation in the foreign funds, and the great demand for money to carry over the time bargains in them to the end of the month. The last price was 92 1-2 to 5-8, and that of the Exchequer bills 51s to 52s premium.

All descriptions of rumors were afloat relative to Spain, but for the most part invention, and put forth probably to assist the reckless gambling transactions going on in the stock of that country, and which is not likely to cease till some fixed value has been put upon it by a decree of the Cortes. The chief topics of alarm among the holders have been today the supposed arrival of Don Carlos in the north of Spain, who did not, as was at first stated, proceed in a steam vessel from Portsmouth, but through France; the spreading of the cholera near the capital; and the illness of the Queen.

There is nothing, however, in the two latter reports to justify the supposition that they will lead to the postponement of the meeting of the Cortes; and with respect to Don Carlos, should he really show himself at the head of the troops, there is little doubt of the Queen's forces soon giving a good account of him. The incident will, however, be productive of this good to Spain—that it will incline the Government the more to liberal measures, in order to secure the support of the constitutional party; and many friends of that cause in London are prepared to expect as a consequence of the arrival of Carlos, an invitation to General Mina to take the command of the army in that quarter.

The fluctuations in Cortes' bonds were between 45 3-4 and 42 1-4, and they left off buyers at the latter prices.

By the advices from Hamburgh, the price of gold is 437 per mark, which at the English Mint price of £3 17s. 10 1 2d. the ounce for standard gold, gives an exchange of 13s. 11d., and the exchange at Hamburgh on London at short being 13s. 9d., it follows that gold is 15-16 per cent. dearer at Hamburgh than in London.

The premium on gold at Paris is 7 per mille, which at the English Mint price of £3 17s. 10 1-2d. the ounce for standard gold, gives an exchange of 25s. 32 1-2d., and the exchange at Paris on London, at short, being 25s. 35s., it follows that gold is 1-10 per cent. lower at Paris than in London.

Since the above was in type, we have, *via* Boston, dates from London to the 21st, giving the ultimate formation of the Ministry, as will be seen in the annexed extracts.

LIVERPOOL, JULY 19.—On Thursday, in Parliament, Lord Althorp, amid loud cheers, announced the formation of the new ministry. The changes are—First Lord of the Treasury, Viscount Melbourne; Home Secretary, Lord Duncannon; Woods and Forests, Sir J. C. Hobhouse. Col. Evans and Mr. Tennyson signified their approval of, and confidence in, the new administration. Mr. Matthias Attwood gave a sort of under growl—sorry, no doubt, that his Tory friends did not come in. The minor arrangements are not yet announced, and we do not know whether Mr. Littleton remains at the head of the Irish affairs; it is probable that he does. Lord Durham has been spoken of for the Irish Viceroyalty, but it seems that Lord Wellesley does not retire.

LONDON, JULY 20.—Lord Melbourne has stepped into Lord Grey's place, and has favored the community with some indications of the course which he means to pursue. The Coercion bill which Lord Grey lately introduced, is to be withdrawn—and another measure, in which the most obnoxious clauses of the present one are to have no place, is to be substituted. This charge, so far as it goes, is good. It may, however, have its origin in no higher source than the expediency which dictates that Lord Althorp, after expressing his disapprobation of those clauses, shall not be called on to re-enter office for the sake of supporting them.

FROM CANTON.—By the arrival, says the Commercial, of the ship Hercules, we are in receipt of the Canton Register of the 25th of March.

The American ship Florida, Captain Tripp, arrived at Canton on the 21st, via Coquimbo. The American vessels Diana, Olive and Eliza, (the former via the Sandwich Islands) had also arrived.—The Splendid likewise was hourly expected.

Captain Wallace, who had sailed from Singapore for Louisa Shoal, in the hope of saving a part of the cargo of the American vessel, New Jersey, which was wrecked thereon, has returned, having fortunate-

y succeeded in recovering from it two hundred jars of quicksilver. He had sailed a second time for the purpose of continuing his search. Two Dutch vessels had also sailed thither for the like purpose.

VARIETIES.

[*From late Foreign Publications.*]

Waggery.—The Bayswater Road is conspicuously placarded with commendatory bills of "THE GREAT WESTERN CEMETRY;" beneath one sheet of which, a wag has inscribed, in equally large letters, "*N. B. New graves warmed by steam!*"

Flowers.—Put a rose, or a lily, or a violet, on your table, and you and Lord Bacon have a custom in common; for that great and wise man was in the habit of having the flowers in their season set upon his table—morning, we believe, noon and night—that is to say, at all his meals; for dinner, in his time, was taken at noon; and why should he not have flowers at all his meals, seeing that they were growing all day? Now here is a fashion that shall last you forever, if you please, never changing with silks, and velvets, and silver forks, nor dependent upon the caprice of some fine gentleman or lady, who have nothing but caprice and change to give them importance and a sensation. Does any reader misgive himself, and fancy that to help himself to such comforts as these would be "trifling?" If this were trifling, then was Bacon a trifler, then was the great Condé a trifler, and the old Republican Ludlow, and all the great and good spirits that have loved flowers, and Milton's Adam himself—nay, Heaven itself, for Heaven made these harmless elegancies, and blessed them with the universal good will of the wise and innocent. The same mighty energy which whirls the earth round the sun, and crashes the heavens with thunderbolts, produces the lilies of the valley, and the gentle dew-drops that keep them fair.—[London Journal]

A curious anecdote is related of George III:—

"The autumn of this year was memorable for the commencement of that first illness of his Majesty George III, by which the Regency question was brought into agitation. The reader will perhaps ask with surprize, what connexion Mrs. Siddons's name could have with the afflicting event of the royal malady? It had only this connexion, that she was the first person who observed in the royal personage grounds to suspect his mental aberration. The king, like all his subjects, thought her talents an ornament to his reign, and he had a profound and cordial regard for her personal character. She was often at Buckingham House and at Windsor. But, when she was on a visit at the latter place, his majesty one day handed her a sheet of paper, that was blank all but the signature of his name. She judged too highly both of her sovereign and herself to believe that, in his right mind, he could show such extraordinary conduct; and the event proved the justice of her conclusion. She immediately took the paper to the queen, who was duly grateful for this dignified proof of her discretion."—[Campbell's Memoir of Mrs. Siddons.]

Lord Brougham and his Alleged Drinking Habits.—The conservative papers have for some time past thrown out broad assertions that Lord Brougham primes himself with large goblets of port wine for his political encounters in the House of Lords. His lordship, in his evidence before the law of libel committee, has lately denied this One foundation, he stated, for the calumny was an excuse given by a respectable daily paper for not reporting a speech of his; but the fact was, that he had tasted nothing that day but tea for breakfast, and he had tasted no fermented liquor, nor had he dined, before he entered the house. In fact he never in his life tasted above three glasses of wine in water before going to the house.

The Pope has this year sent the golden rose, which he consecrated on the Sunday styled Læ:are, to the city of Venice, as a token of regard to the capital of the Republic, of which Belluno, his native place, formed a part. The institution of the golden rose goes back to the year 1049, in the time of St. Leo IX. That head of the church was anxious to subject directly to the Holy See the celebrated monastery of St. Croix, in Alsace, which was founded by his ancestors, and over which he had the right of patronage. By an arrangement, the monastery engaged to send to him and his successors, on the fourth Sunday in Lent, a golden rose, or two ounces of gold. The Sunday is called Lætare, in virtue of the homily of Pope Innocent III, in order to excite the Catholics to spiritual joy at the approach of Easter, and the end of their penitence.—From this idea was established the ritual of the consecration and unction of the golden rose, which figures Christ, the King of kings, represented by gold, the most precious of metals, and by its odoriferous balm the resurrection of the Saviour. Formerly the rose was colored with carmine, to represent the blood which the Redeemer shed for his people; but at present it is in polished gold, and the Pope, after its consecration, carries it in procession in his left hand, whilst with his right he pronounces his benediction on the faithful. This rose is given by the Sovereign Pontiff every year to a Prince or City of Christendom entitled to the favor of the church. The Venetian Republic, which was the cradle of several Popes, possessed five of them in the treasury of St. Mark; they disappeared during the last wars in Italy. [The first was given in 1596 to the Doge Vendramin, by Sixtus IV, and Gregory XVI has sent the sixth rose to the capital of his country.—[French paper.]

Growth of Person.—The growth ceases soonest in the most excitable habit, because in them the excitability will soonest be reduced to a due balance with the stimulants of life. Thus it seems to be that the growth of women, who are more excitable than men, generally stops sooner, and consequently that they are of shorter stature, large women for the most part having less of the habit peculiar to their sex; and that by far the greater number of the most excitable men who, in consequence of this constitution, make the greatest figure in their day, are men of short stature, while giants are generally of an opposite habit of body. There must, of course, to such rules be many exceptions.—[Philip on Sleep and Death.]

Gift to the Negroes.—The committee of the British and Foreign Bible Society have resolved, "That a copy of the New Testament, accompanied by the Book of Psalms, in a large type, and substantially bound, be tendered to every person receiving the gift of freedom on the approaching 1st of August, who can read; or who though not able to read, is at the head of a family in which there are readers or children learning to read: such parties receiving a recommendation from a minister, teacher, or employer.,'

A few days since, a woman in Paris having purchased some macaroni of a grocer, in the Faubourg Mortmartre, perceived that the wrapping paper contained the name of Voltaire. Examining the writing on the sheet more closely, it was found to be an original letter of Voltaire. The text of this letter was copied, and inserted in the public prints, and was found to have never before been published. The following is, as near as possible, a literal translation from Le Courrier Francais, 29 Mai, 1834.

"M. le Controleur-General:

"If it was requisite to pension every man of talent in France, it would inflict an honorable but a disastrous wound on your finances, which the Treasury might not be able to support; also, and though few men can be found possessing the solid merit of M. de la Harpe, I do not come forward to solicit a pension for merit in indigenee; I come simply, sir, to encroach so far on your *attributions*, as to control the entry of the two thousand *livres*, which His Majesty has been so good as to grant me annually. It appears to me that M. de la Harpe having no pension, mine is too high by one-half, and ought to be divided between us.

"I should esteem it, sir, therefore, as claiming from me the highest gratitude, if you will have the kindness to sanction this arrangement, and have transmitted to M. de la Harpe his warrant for a pension of one thousand livres, without giving to him the most distant hint that I am in any way concerned in the event. He will himself, as will the public, be easily convinced that this pension is a just recompence for the services he has rendered to literature.

"Deign, Monsieur le Controleur General, to accept in advance my thanks, and believe in the profound respect of your very humble and obedient servant, "AROUET DE VOLTAIRE."

PAROLES D'UN CROYANT—*Words of a Believer.*—The following is the estimate of the amount of sales of this production of M. de la Menais.

Paris common edition 100,000 copies; popular edition 200,000 copies. Brussels, common 6,000; popular 2,000. Louvain popular 20,000; and, besides, there has been an Italian translation, circulated chiefly in Lombardy and the Marches of the Papal Territories; and a Polish translation, circulated chiefly in Galicia. They are preparing a German translation at Paris; one for the Dutch Netherlands at Ghent; and one for the Flemish Netherlands (Belgium) at Brussels. We also believe there are several English editions in the market, in London; and that Mr. O'Connell is engaged on one in the Erse of Ireland.—[Ee Courrier des Etats Unis.]

MARTIN, LESLIE AND ALLSTON.—The following letter from the celebrated artist Martin, to the editor of the London Athanæum, is interesting. The painting, by Mr. Allston, referred to in the last sentence, is not yet completed—and may possibly never see the light.

"I had not the pleasure of knowing my friend Allston until I was, in some degree, known as an artist; but I will give you a slight sketch, a mere outline, of my early career, and also of my first introduction to Allston, which, as it relates to more than myself, may not be uninteresting to you. I was not seventeen when I first arrived in London, where I was to be under the protection of Boniface Muss, or Musso, a clever master, the father of Charles Muss, the celebrated enamel painter. My first resolve on leaving my parents was, never more to receive that pecuniary assistance which I knew could not be spared, and by perseverance I was enabled to keep this resolution. Some months after my arrival in London, finding I was not so comfortable as I could wish in Mr. C. Muss's family, I removed to a room in Adam street west, Cumberland Place, and it was there that, by the closest application till two or three o'clock in the morning, in the depth of winter, I obtained that knowledge of perspective and architecture which has since been so valuable to me. I was at this time, during the day, employed by Mr. C. Muss's firm, painting on china and glass, by which, and making water-color drawings, and teaching, I supported myself; in fact, mine was a struggling artist's life, when I married, which I believe you know I did at nineteen.

It was now indeed necessary for me to work, and as I was ambitious of fame, I determined on painting a large picture. I therefore, in 1812, produced my first work, 'Sadak in search of the Waters of Oblivion,' which was executed in a month. You may easily guess my anxiety, when I overheard the men who were to place it in the frame, disputing as to which was the top of the picture! Hope almost forsook me, for much depended on this work. It was, however, sold to the late Mr. Manning, the bank director, for fifty guineas, and well do I remember the inexpressible delight my wife and I experienced at the time. My next works were 'Paradise,' which was sold to a Mr. Spong, for seventy guineas, and 'The Expulsion,' which is in my own possession.—My next painting, 'Clytie,' 1814, was sent to Mr. West, the President, for his inspection, and it was on this occasion that I first met Leslie, now so deservedly celebrated.

I shall never forget the urbane manner with which West introduced us, saying, 'that we must become acquainted, as young artists who, he prophesied, would reflect honor on their respective countries.'—Leslie immediately informed Allston, who resided in the same house with him, that he had met me.—Allston requested to be introduced, as he had felt a strong desire to know me from the time he had seen my 'Sadak,' but a sort of reserve had prevented his introducing himself, although he had several times taken up his pen to do so. Thus, twenty years ago, commenced a friendship which caused me deeply to regret Allston's departure for his native country, for I have rarely met a man whose cultivated and refined taste, combined with a mild, yet enthusiastic temper, and honorable mind, more excited my admiration and esteem.

It is somewhat singular, that my picture of 'Belshazzar's Feast,' originated in an argument with Allston. He was himself going to paint the subject, and was explaining his ideas, which appeared to me altogether wrong, and I gave him my conception; he then told me that there was a prize poem at Cambridge, written by T. S. Hughes, which exactly tallied with my notions, and advised me to read it. I did so, and determined on painting the picture.—I was strongly dissuaded from this by many, among others, Leslie, who so entirely differed from my notions of the treatment, that he called on purpose, and spent part of a morning, in the vain endeavor of preventing my committing myself, and so injuring the reputation I was obtaining. This opposition only confirmed my intentions, and in 1821 I exhibited my picture. Allston has never seen it, but he sent from America to say, 'that he would not mind a walk of ten miles, over a quickset hedge, before breakfast, to see it.' This is something from a bad walker and worse riser. His own 'Belshazzar' was not completed for many years, not till very lately, I think."

NEW-YORK AMERICAN.

AUGUST 17—22, 1834.

LITERARY NOTICES.

THE LIFE OF MOSES: BY G. T. BEDELL, D. D. Rector of St. Andrew's Church, Philadelphia.

THE LIFE OF DAVID, KING OF ISRAEL: by the Author of 'Bible Sketches.'

ANNA ROSS; A STORY FOR CHILDREN: by the Author of 'Decision,' 'Father Clement,' &c.

A MAP OF JERUSALEM, compiled from Josephus and the Reports of Modern Travellers.—These four publications all proceed from the press of the American Sunday School Union in Philadelphia, and are to be had in this city at the Sunday School depository, 295 Broadway.

The titles of these little volumes explain their object sufficiently, save that of *Anna Ross*, and concerning it we may say, that it is the history of a little girl, made an orphan by the result of the battle of Waterloo, who, left to choose between living in comparative poverty with a pious uncle, or in splendor with a worldly one, elects after trial, and at ten years of age, the former. The power which those who have read Father Clement know to belong to its author, is abundantly exemplified in bringing about and accounting for this not quite probable choice.

THE HOUSE I LIVE IN, Part I: by WM. A. ALCOTT: Boston. LILLY, WAIT, COLMAN & HOLDEN.—This is an ingenious and well executed attempt to impart to children a knowledge of the structure of the house they live in—the human body—without exciting any disgust, and without resorting for explanation of what is said, to any thing but the plates in the book itself. We are sure this will be a popular little volume, and as useful as popular; for it is not creditable to be so ignorant as very many are of that most ingeniousl constructed machine, the human frame.

TUTTI FRUTTI, by the author of the Tour of a German Prince; 1 vol.; New York, *Harper & Brothers.*—Attracted by the quaint title of this publication, borrowed, as we learn by the translator's introduction, "from the favorite ice of Italy," composed of many different fruits—it means literally "all the fruits"—and by the abounding puffe of the contemporary press, on its appearance among us, we certainly opened its pages with no little eagerness—only to close them, however, in disappointment. Instead of light, graceful, and *piquante* literature, or gossip, or trifling—as from the title we anticipated—it seems to us made up of the rejected fragments of a heavy common place book—the gleanings after the harvest. It is not that it does not contain things cleverly written; sensible and judicious, though not very original reflections on political matters; but that it in no wise realizes the expectations raised by a title which almost makes the mouth water. The Prince, we fear, who made so admirable a book upon England, has been betrayed by its popularity to accede to the solicitations of the booksellers to give them another work. At least we cannot otherwise explain the appearance of this one.

We select, as one of the best "fruits" of the collection, the following letter descriptive of Berlin and its society:

TO THE COUNTESS R***,—COPENHAGEN.

Berlin, Jan. 1st, 1832.

Patriæ fumus igne alieno lucalentior.

* * * * *

In the present form of government of Prussia, there is undoubtedly much to be desired; the organized "bureaucracy" of her interior deserves much censure; her veiled political movements, the burthen of her extensive military establishment, which has become too oppressive for the strength and vigour of the nation to support, are evils which demand redress: but this state of things cannot remain long—by the action of some unexpected incident they will assume another and more improved form, for in a nation where intelligence is so universally diffused, these, and similar defects, are of minor importance; when this intelligence exists, the happiness of men advances, even under a defective government, but without this holy fire the most perfect theory will be found ineffectual in its operations. Thus we may venture to hope that every reasonable ground of complaint will gradually and peaceably disappear, and so realize the wishes of all true lovers of rational liberty, who have nothing in common with the mad levellers of modern times. The signs of the times never deceive. May we not anticipate happier days for Germany? and is it not for us a proud idea that it may be reserved for Prussia to effect her regeneration?

But I forget, my dear cousin, that I am addressing an elegant and accomplished woman, who, instead of grave reflections and political discussions, expected to receive merely a hasty sketch of our manners and customs; but how is this possible, from a man who is already half a hermit, a miserable courtier, and worse than all, absolutely a "deceased," at least I have been so baptized by that fabricator of histories, the editor of the Morgenblatt.

However, I must fulfil my promise—so we will commence with the court: this is numerous, but its society consists chiefly of members of its own circle; in general, very few visiters and foreigners are invited to join the select coterie, with the exception of some Russians of high rank; foreigners of other nations are but little noticed, and seldom remain long in Berlin. There is still less attention shown to the nobility of the country, who occasionally visit the metropolis, thereby verifying the old adage, "No phrophet is honored in his own country."

This is sincerely to be regretted, as by far more urbanity of manners, graceful freedom, and variety of tone, reign in the court, than in the most distinguished circles of the town; the ladies are assuredly among the most delightful and amiable of Berlin; and I merely suggest whether it would not, for their sakes, be expedient to introduce the etiquette of the old Spanish court, which, in obedience to its statutes, permitted those cavaliers who were captives to the charms of the court ladies, not only to remain uncovered in the presence of the monarch, but even to sit—it being most charitably supposed, that in the presence of so much loveliness, and engrossed by the intensity of their passion, they were incapable of giving their attention to the ceremonies of a court!

Whether the cavaliers of our court are as deeply susceptible to such a fascinating influence, I cannot venture to decide; but this I can with truth assert, that many of them are distinguished by the elegance of their manners, and their intellectual attainments. Where the highly talented Alexander von Humboldt is a lord of the bed-chamber, a court almost appears an academy; and in the Duke Charles of Mecklenburgh and the upper Court-marshal von Schilden, we have all that imagination can paint of genius and high birth united in their noblest forms.

If I may, without incurring the imputation of a flatterer from the modern heroes of equality, I will unhesitatingly assert, that those who occupy the first rank by birth, occupy it also by grace, beauty, virtue.

Although it is too much the prevailing spirit to yield implicit credence to every tale of ill which is circulated respecting the great ones of the earth; yet I have not imbibed it, neither do I belong to that class of cowardly slanderers who promulgate in foreign publications the most unfounded and malicious calumnies, such, for instance, as that the accession to the throne of our revered Crown Prince is an event to be dreaded by his future subjects; whereas, whoever is intimately acquainted with him must be familiar also with his noble patriotic feelings, with his anxiety for the prosperity of his country; and few modern princes are more opposed in principle to tyranny and oppression. He has even been accused of bigotry, which charge has originated solely in the circumstance that he has munificently bestowed favors upon persons who are notoriously of the devout class; and we may be assured, that this accusation is as unfounded as it is malicious.

That he is pious, humane, and a pattern of morality, is indisputable; these qualities have, it is well known, been construed by the enemies of peace and good order into bigotry; but I would desire no greater blessings for the nation than to see the sons of our nobles and citizens emulate the example of the sons of their king. I would wish them to imitate the high attainments in every branch of knowledge, and the copious general information of the Crown Prince; to possess the cool, temperate judgment, clear discernment, and truly honest German heart of Prince William, and the brilliant virtues of Prince Charles, who is, to use the words of Shakspeare, "every inch a king."

Respect and reverence arrest my pen from attempting to expatiate on the excellent qualities of the princesses, and my enthusiastic admiration would be likewise a serious hindrance to the impartial discharge of my duty; but this I may safely assert, that our lovely and amiable princesses are equally to be envied for their domestic happiness, and admired for their beautiful example of virtue to the nation, upon whom the brightest rays of moral excellence beam from the royal family and the throne.

We will now descend a step, and take a hasty glance at the higher ranks of society, in which the first thing that arrests the eye of the observer is the absence of any cordial intercourse between them and the corps diplomatique, which has an unfavorable effect upon both: this is principally owing to the circumstance that, unless on a few public occasions, the members of the corps diplomatique are entirely excluded from the court of the sovereign.

Berlin is, generally speaking, destitute of any decided tone; fashion exercises but a feeble sway, and there is no individual subject of paramount importance to impart a determined character to society. There is neither political nor, indeed, any other description of party feeling, which, it is well known, always animates conversation.

The total absence of luxury contributes also not a little to render society monotonous; in this respect both the natives and the corps diplomaique accord admirably with each other.* In fact, luxury is only found in the palaces of the royal family, but, as I have said before, their society is confined principally to their own circle.

The only recreation met with in society is cards; for as soon as the company have assembled and performed a few preliminary evolutions, they seat themselves in different conglomerations around card-tables, reminding the spectator of a large bowl of "churned milk." Conversaziones, with the exception of a very few houses, are unknown; perhaps our phlegmatic national temperament is not so well adapted to them as that of our mercurial neighbors the French; but where the two elements of solidity and brilliance have found an entrance the result is delightful, as the saloon of the Minister of Foreign Affairs will abundantly testify.

The most national and the most animated entertainments are the balls. During the carnival they are numerous, while the dancers themselves are both graceful and untiringly persevering.

Déjeûners à la fourchette, with balls, have lately become fashionable; they commence at eleven and end at sunset. These, in summer, are very agreeable, particularly when given in a charming garden: but entertainments of this description appear more congenial to England, where the guests assemble both in négligee and demi-toilet. Alas! such a summer-day's dream is not often practicable in this country, especially as enthusiastic admiration of the beauties of nature forms no part of education, that never-failing source of pure delight being but little prized. A young officer, to whom I was one day making an observation to this effect, answered, laughing, "You are perfectly correct, and I will give you an instance of it.

"Last year, as I was riding with my general to a review through one of the most bewitching valleys in the neighborhood of the Rhine, when the bright beams of the rising sun were beautifully gilding both the woods and hills, I burst into admiration at the glorious spectacle, and endeavored to make the general participate in my feelings."

"'What are you saying?'

"His voice and manner being any thing but encouraging, I hesitating repeated my observation, when he harshly exclaimed—

"'Zun Teufel! Young gentleman, think of your military duties, and do not tease me with your poetical ideas!'"

Many of our young military officers are most wonderfully well informed; perfect oracles in their way! whose decisions are *sans appell.* I recently witnessed a very comic "qui-proquo." The amiable Frau Von B—— was reading a verse of Dante, from an admirable translation; one of the most fashiona-

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* This was written in the beginning of the year 1832; since that time most of the corps diplomatique have been superseded by new members, whose superior taste has given society a more elegant tone. We will hope that their good example may be followed by the upper classes of society.—[The Author.]

ble warriors in the salon demanded the name of the author? the lady answered, "My beloved Dante."

"Is it possible," cried the son of Mars, with astonishment, "I never could have believed that your *tante* (aunt) was equal to such a composition."

The errors of the old warriors are sometimes even more ridiculous, and their blunders are an endless source of merriment. When the present President of Columbia was in Berlin, about two years since, I accidentally overheard a conversation between him and a Prussian officer; instead of German, it was carried on in horribly bad French.

A picture of a battle led them to speak of the celebrated one of Waterloo.

"Most certainly," exclaimed Santander, "at that great battle, without the assistance of your immortal hero Platoff, Napoleon would not have been conquered!"

The Prussian general smiled, politely rectified his mistake, and continued, saying, "But your campaigns are not less remarkable: for instance, what a march was that of Bolivar to Mexico and back, across the Tschimborasso—the short time in which it was effected is scarcely credible!"

"I beg pardon," said Santander, in his turn, half smiling; "you have made an error in some thousands of miles, for Bolivar was never engaged in war in Mexico, therefore he could not have come in collision with the Tschimborasso. Notwithstanding, our marches are really astonishing; in fact, our method of conducting war is entirely different from the European mode; our soldiers are able to support themselves for months without bread, meat, or spirits, living entirely on dried ox skins and water."

"Comment! monsieur!" cried our general, in his inimitable jargon, and with a voice and manner expressive of his greatest astonishment—"Comment! pas de *bain?* pas de *poissons spirituels?* pas même *de l'eau forte?*"

"It required all my powers of self-command to preserve my character for politeness, when Monsieur Santander, not appearing to observe the errors of his friend, replied, with an air of the most important gravity,

"Non: *rien de spirituel*, monsieur, pas même *de l'eau forte*."

One of the amusements peculiar to Berlin, and in which are to be found assembled nearly all classes of society, is that termed the "Bruhl'schen Ball," from the name of its founder, which thus bids fair for immortality. The gentlemen are attired in black, while the ladies select the gayest colors to decorate their pretty persons, which they sometimes adorn a little too lavishly; the entrée is absolutely forbidden to pantaloons, black cravats, and boots (in the redoute to dirty boots)—what an admirable precaution! It is rumored that the manager of the court theatre intends to distribute among the quadrilles a band of fancy dancers, in full costume, for the purpose of amusing the high and select assemblage.

The tournée of the supper table is excessively amusing, but somewhat dangerous, on account of the myriad of corks which fly from the champaign bottles in every direction! At the last of these balls I had the pleasure of visiting, I observed our good-hnmored prince, Albrecht, with his aid-de-camp, wandering from room to room unable to find seats. I could not forbear laughing at my friend C——, who exclaimed with enthusiasm, "This is what is termed an absolute monarchy, and yet the son of our king cannot obiain a seat at the supper table, because his good citizens have taken possession of them. A Constitutional Orleans would have fared better."

"Yes," replied I, "it is the wonder of foreigners that we all appear to form one family, the king and his people, the father and his children. On that account, thank God, we require no revolutions; let us be thankful for a sound body that does not require periodical blood-letting."

As to places of public resort, we have very few in Berlin, except the theatres and concerts. Yes, most truly, we have in addition the wooden-booth in Tivoli! to which you are conducted by an allée dug in the earth, and where the half-decayed pine-trees exhibit the only appearance of vegetation.—Also the Elysium! erected in the sandy Zoological Gardens, where the secret has been discovered of adorning the superb salon in such a manner that the unexampled mixture of colors acts upon the beholders like ipecacuanha! these, with the colosseum of colossal vulgarity, are the favorite places of amusement. I have been informed that even the noble *Casino* has died of a decline.

Music is much admired and cultivated in Berlin: the Moser Quartett concerts are particularly distinguished, where the chef-d'œuvres of the best masters are performed with a full orchestra, in the most masterly style.

Last winter I once more visited Berlin, when I became acquainted with the representative of the St. Simonians. One morning he wrote to Fraulein S——r, requesting to know if it was really true that Beethoven was to sing that evening? the lady replied very *gravely*, that she did not consider it probable, as a cold damp *grave* was a most likely place to produce such a hoarseness as would preclude the possibility of singing!

I also had the pleasure of again meeting my honorable friend, the old general of Waterloo; he bitterly complained of the intense cold, and of the deep snow that had fallen, and assured me, (in his matchless French,) "qu'en entrant plusieurs *grands flacons* de niege étaient venus lui tomber sur le nez."

I shall dedicate a portion of my next letter to the theatre; for the present I must conclude, or I shall exhaust all that I have in reserve on our interesting Berlin.—Adieu.

A Digest of the Existing Commercial Regulations of Foreign Countries with which the United States have intercourse, as far as they can be ascertained. *Washington:* F. P. Blair. 1833.—This is a large octavo volume, of more than 700 pp. and is only the first of a series, to be "prepared under the direction of the Secretary of the Treasury, in compliance with a resolution of the House of Representatives of 3d March, 1833."—In this volume, we have the regulations of Great Britain, Portugal, the Netherlands, Prussia, the Hanse towns, Denmark, New Granada, the Two Sicilies, and Mexico. This Digest, the third that has been prepared within fifteen years—there was one in 1819, and another in 1824—has been executed, so far as it goes, by a very competent person, J. Spear Smith, Esq. of Baltimore, and includes a great deal of very valuable information, particularly in relation to Great Britain, whose regulations of commerce and navigation occupy more than one-third of the volume.

The Comprehensive Commentary on the Holy Bible: edited by the Rev. Wm. Jenks, D. D., Pastor of the Green street Church, Boston. *Brattleborough, Vt.* Fessenden & Co. *Boston,* Shattuck & Co.—We have not seen from the American press, a work superior to this, in its mechanical execution and materials. The type, the paper, and the printing, are excellent.

The volume is a large royal octavo, and comprizes the four gospels only, so that four or five more of equal size, will be requisite to complete the publication. The text is printed in a clear legible type, on the left hand of the page; and it is accompanied and surrounded in a smaller type, with observations and notes explanatory, historical, and critical, by Henry, Scott, Doddridge, Adam Clarke, Calmet, Bloomfield, and many others—"the whole designed to be a digest and combination of the advantages of the best Bible Commentaries, conveniently arranged for family and private reading, and at the same time particularly adapted to the wants of Sabbath School Teachers and Bible Classes."

The preparing and editing this publication is a work of immese labor and expense; and devoted, as these are, to the elucidation of the Book of Books, it may be reasonably inferred that in this Christian country they will reap an abundant reward.

Bicknell's Gold Coin Chart.—This essential, though not very portable, description of all sorts of gold coins, may be had of *J. A. Goodman & Co.*, Brokers, 34 Wall street.

It is, we are assured in a note from Mr. Bicknell, "compiled with much care and attention, and may be relied upon as correct."

It gives the name of every piece of gold coin in the world, the exact weight, the assay and the present value in the United States.

Essay on the Interest of Money and the Policy of Laws Against Usury. By Thos. R. Dew, Professor of Political Economy, &c. at William and Mary.—This Essay, as we learn from the introduction, "comprises the substance of two Lectures, much enlarged," which the Professor had delivered to his class. It is worthy of general circulation in this country, of all others, the one most injured in its enterprize and industry by the shackles of Usury Laws. We make a single extract from the Essay, which will shew its general views and execution:

Pernicious Influences of the Usury Laws.—We assert, and the assertion requires no proof, that the usury laws are unjust and unequal in their operations, restraining the holders of a particular species of capital from employing it in the most lucrative manner, whilst the holders of other species of capital are left in the enjoyment of perfect liberty. The owner of lands and slaves may take what rent and hire he pleases—the merchant is not restrained as to his gains, nor the manufacturer as to his profits. Why then should the money holder be prevented from taking the interest which the borrower is willing to give? Is it because the money holders are vicious, selfish beings, whom it is the policy of the laws to suppress and discountenance? I apprehend not.—Widows, orphans, the defenceless and helpless are often the money holders. When a father dies, to whom does he leave his money? Most frequently to the invalid son, or the exposed and defenceless daughter. To his sons who are fitted for action on the great theatre of life, he gives other kinds of property which require more skill and care to manage them. The salaried men and all the functionaries of society are to be ranked among the money holders. Are these classes of such a character as to require the strong hand of legislation to correct their malpractices? Certainly not. As a class, I should say the money lenders are generally speaking, the most harmless and defenceless, or the most talented and respectable members of society. Is it because money is a commodity *sui generis*, the holder of which is enabled by its means to take what interest he pleases, the borrower being obliged to give it? There are many, I believe, who absurdly entertain this opinion—who really believe that money is in the economical world what the superstitious believe the witches to be in the physical, a something not bound down and governed by the laws of gravity and cohesion—by the laws of supply and demand, but as possessing an active principle of its own, a sort of *vis inerta*, of the most dangerous character, not only not governed by the ordinary laws of nature, but capable by its own energy, of resisting and deranging them. Those who entertain such an opinion however, either do not or cannot understand the nature of the circulating medium, and the laws which regulate the rate of interest. Interest, like the price of every thing, is determined in the market, by a struggle between the borrower and lender; the former of course wishing to fix it as low as possible, while the latter would make it as high as possible. When profits are high, or much is to be made by the use of capital, or the risk is great, more will be demanded on the one side and conceded on the other, than when the reverse is the case. Capitalist competes with capitalist, as well as borrower with borrower: where much is to be made by money, much will be given; where little is to be made, little will be given. Hence in the new states of our confederacy, interest is much higher than in the old, because more can be made by the use of money. In Alabama for example, eight per cent. interest may be legally taken, in Mississippi ten, in Louisiana ten—and it is believed these rates are generally rather below the the marketable rate of interest in those new states: whereas in all the old states, with the exception of New York, South Carolina and Georgia, six per cent. is the legal rate, and perhaps in most cases nearly coincident with the average market interest.

The interest of money, it must be remembered, does not depend on the quantity of money in the country, but upon the whole quantity of capital, (of which money is one, and by no means the most valuable item,) compared with the channels of profitable investment. As I have already said, when money is borrowed, it is not the money, but the money's worth which is wanted. The merchant wants goods, the agriculturist new lands, or improvement of old land; the manufacturer wants machines and raw materials; the lawyer wants education and professional skill. They borrow money for these several purposes, and the rate which they are willing to give does not depend on the quantity of money in the country, but on the gains which the merchant, the manufacturer, and the agriculturist, expect to make on their goods, on their manufactures, on their land, and upon the emoluments and reputation which the

lawyer and doctor have in prospect. Money is merely the agent for the circulation of capital generally. If money is scarce, its value rises; if too redundant, it falls; and the rate of interest is never *permanently* affected by its high or low value. If $50 be worth to-day as much as $100 was yesterday, $3 on the $50 will be worth just the same as $6 on the $100. The only effect produced on interest is while the change in value is taking place. Thus, let us suppose the banks begin to over issue; there is consequently an increased facility of borrowing, which may lower interest *temporarily;* then an appreciation of prices ensues, and so soon as prices become stationary, interest rises to the rate which is determined by profits and risk.

So far from there being any reason for restraining the rate of interest, there are some reasons why it is better regulated by the laws of trade and the influence of public opinion than perhaps any thing which can possibly be mentioned in the whole catalogue of commercial transactions. *First.* Money being the universal measurer of value, is better known, its agency in the hands of individuals better understood, than any other species of property whatever. *Second.* Great concentration of value in small bulk renders it the most transferable of commodities, and consequently it passes more rapidly from places where it is redundant to those where it is deficient, than any commodity we know of. From this cause it is, that competition among capitalists is more certain to keep down the *hire* of *money* to a fair proportion to profits and risk, than any other species of hire whatever. You cannot carry lands and houses from one section to another, to keep down rents; manufacturing establishments are incapable of locomotion, and therefore the exorbitant profits of one are slowly corrected by another: labor moves so sluggishly from district to district, that Smith pronounced man the most immoveable of lumber. Hence the slowness with which the equilibrium is restored in the labor market. But money passes from section to section with all the rapidity of the mail and the steamboat. Is there a great demand here for it to-day, while there is a relative redundancy elsewhere?—The easy transference of it from place to place, will quickly restore the equilibrium. If A, a monied man, charges too high an interest in proportion to profit and risk, B, another monied man in the same neighborhood will find it to his interest to take less: and if neither will take a fair rate, capital will speedily flow in from other quarters, and relieve the pressure. At this moment, large amounts in specie are pouring into the United States, in consequence of the money pressure; and no doubt if public confidence could be suddenly restored, we should be found to have a greatly redundant circulating medium.

Hires, rents, interest and prices of all descriptions, are determined by the ratio of the supply to the demand.

A Plain Treatise on Cholera: by Dr. Ralph, of Edinburgh, &c. New York.—We find this treatise upon our table, and announce it accordingly; but as it is against our practice in Cholera times to read Cholera books, or to recommend the reading of them to others, we content ourselves with the mere annunciation of it.

The Southern Literary Messenger—devoted to every department of Literature and the Arts. No. I. Richmond, Va. T. W. White.—We receive with pleasure this first number of a Southern magazine, to be published semi-monthly. There is so much that is peculiar in the condition of Southern society, so much that is inspiring in the history and memorials of Virginia in particular, and so large a class comparatively of educated men in that region of our country, who are not working-men, and therefore have the more leisure for literary efforts, that we are sure, if they will only put themselves forth, that a very attractive miscellany would result from their labors. The number before us is of good promise. We have only room, however, to take from it the following translation from Voltaire:

The Consoled.—The Great philosopher, Citophilus, said one day to a justly disconsolate lady—"Madam, an English Queen, a daughter of the great Henry IV. was no less unhappy than you are. She was driven from her kingdom: she narrowly escaped death in a storm at sea; she beheld her royal husband perish on the scaffold." "I am sorry for her," said the lady—and fell a weeping at her own misfortunes.

"But," said Citophilus, "remember Mary Stuart. She was very becomingly in love with a galliant musician, with a fine *tenor* voice. Her husband slew the musician before her face: and then her good friend and relation, Elizabeth, who called herself the Virgin Queen, had her beheaded on a scaffold hung with black, after an imprisonment of eighteen years."—"That was very cruel," replied the lady,—and she plunged again into sorrow.

"You have perhaps heard," said her comforter, "of the fair Jane of Naples, who was taken prisoner and strangled?" "I have a confused recollection of her," said the afflicted one.

"I must tell you," added the other, "the fate of a Queen, who, within my own time, was dethroned by night, and died in a desert island." "I know all that story," answered the lady.

"Well then, I will inform you of what befel a great princess, whom I taught philosophy. She had a lover, as all great and handsome princesses have. Her father once entered her chamber, surprised the lover, whose features were all on fire, and whose eye sparkled like a diamond: she, too, had a most lovely complexion. The young gentleman's look so displeased the father, that he administered to him the most enormous box on the ear, ever given in that country. The lover seized a pair of tongs, and broke the old gentleman's head: which was cured with difficulty, and still carries the scar. The nymph, in despair, sprang through the window; and dislocated her foot in such a way, that she to this day limps perceptibly, through her mien is otherwise admirable. The lover was condemned to die, for having broken the head of a puissant monarch. You may judge the condition of the princess, when her lover was led forth to be hanged. I saw her during her long imprisonment: she could speak of nothing but her afflictions."

"Then why would you not have me brood over mine?" said the lady. "Because," said the philosopher, "you *ought not* to brood over them; and because, so many great ladies having been so miserable, it ill becomes *you* to despair. Think of Hecuba, of Niobe." "Ah!" said the lady, if I had lived in their time, or in that of all your fine princesses, and you, to comfort them, had told them my misfortunes, do you thing they would have listened to you?"

The next day, the philosopher lost his only son; and was on the point of dying with grief. The lady had a list prepared, of all the kings who had lost their children, and carried it to the philosopher: he read it, found it correct, and —— wept on, as much as ever. Three months after, they met again; and were surprised to find each other cheerful and gay. They caused a handsome statue to be reared to time, with this inscription: "to the great consoler."

A Map of the Railroads and Canals in the United States and Canada, accompanied with a concise description of each. New York: Office of the Railroad Journal.—We scarcely know any publication so well calculated as this to exhibit at a glance the vigorous and successful enterprize o the United States in the career of internal improvements. It will too astonish many persons to find how much has been already complated in this career, and how much more is in a train of accomplishment. The lines are distinguished on the map, of enterprises contemplated, commenced, and finished—so that it may be seen at once what the actual state of each work is. There about 70 pages of letter press, which furnish a brief and accurate description of each road or canal; the whole bound up in a little pocket volume.

The Declaration of Independence, beautifully printed in gold letters on stiff paper, so as to admit of being framed, has been sent forth from the Xylographic press of Messrs. Wright & Durand, Maiden lane.

The Whig Almanac for 1835—is another publication, of which the notice may appropriately follow that of the *Declaration of Independence*, between which great event, and the name and principles of Whigs, the association is inseparable.

This Whig Almanac, which besides all the usual information of an almanac, has some very good Whig sentiments in the shape of aphorisms, extracts from Whig speeches, &c. may be had of J. & C. Strong, 150 Houston street.

The *Memoirs of M. de Chateaubriand*—of which the publication is to be deferred till after his death—are referred to and described by himself, in what he calls a Testamentary Preface—which, however, he publishes while yet alive, and of which a very good translation will be found in our columns today.

The singular and varied life of this soldier, poet, traveller, and statesman, recorded in his sparkling and antithetical style, and with his simple and almost unconscious egotism, will constitute a most attractive work. The Testamentary Preface of itself affords a good foretaste of the book.

[Translated for the New York American.]

MEMOIRS OF M. DE CHATEAUBRIAND.

Testamentary Preface.

Paris, Aug. 1832.

As it is impossible for me to foresee the hour of my dissolution, and as, at my advanced age, the days of man are days of grace, or rather days of pain, I intend to explain myself on the subject of a work undertaken, to cheer the gloom of those last hours of a man's life, which no one values or knows how to employ.

The Memoirs at the head of which this preface will be placed, embrace the whole course of my life. They were begun in 1811, and continue up to this time. I have sketched, and will fill up more accurately, the history of my childhood, my education, my youth, my entering the army, my arrival at Paris, presentation to Louis XVI, the beginning of the Revolution, my voyages to America, my return to Europe, my emigration to Germany, and to England, my return to France under the Consulate, my occupations, and my writings, during the Imperial sway, my visit to Jerusalem, my occupations, and my writings under the Restoration; finally, the complete history of that Restoration, and its fall.

I have seen and known all the men who have played any distinguished part in my day, either in my own country or in others, from Washington to Napoleon, from Louis XVIII to Alexander, from Pius VII to Gregory XVI, from Fox, Burke, Pitt, Sheridan, Londonderry, Capo d'Istria, to Malesherbes, Mirabeau, &c. from Nelson, Bolivar, Mehemet, the Egyptian Pacha, to Suffern, Bougainville, La Perouse, Moreau, &c. I formed one of a Triumvirate, without precedent among nations; three poets of opposite interests and countries were at the same time at the head of foreign affairs, Mr. Canning, in England, I, in France, and Martinez de la Rosa, in Spain.

I have successively journeyed through the idle years of my youth, and the busy years of the Republican era, the splendid pageant of Buonaparte, and the reign of the legitimates.

I have explored the seas of the old and the new world, and trodden the soil of the four quarters of the world: after having encamped under the hut of the Iroquois, the tent of the Arab, in the wigwams of the Hurons; among the ruins of Athens, of Jerusalem, of Memphis, of Carthage, of Grenada; among the Greeks, the Turks, the Moors; among forests and ruins; after wearing the bearskin of the savage, the silk caftan of the Mameluke; after enduring poverty, hunger, thirst, and toil; I have assisted as Minister and Ambassador, covered with gold, glittering with ribbons and orders, at the feasts of Princes and Princesses, to return to poverty, and breathe the air of a prison.

I have been intimately connected with a number of celebrated persons in the army, the church, politics, the bar, the arts and sciences; I have immense materials, more than four thousand private letters, the diplomatic correspondence of my various embassies, that of my proceedings as Minister of Foreign Affairs, among which are some papers of my own hitherto never known; I have borne alternately the musket of a soldier, the staff of a traveller, the scrip of a pilgrim; as a mariner my fate has shifted like my sail, and, halcyon like, I built my nest upon the waters.

I have had much to do both with war and peace; I have signed treaties and protocols, and published, as I journeyed on, numerous works; I have been initiated in the secrets of parties, of courts, of state; I have viewed closely the greatest misfortunes and the greatest men; I have assisted at sieges, at congresses, conclaves, and at the putting up and pulling down of thrones; I have myself been an object of history, and I could have written it, and my solitary, dreaming, poetical life, glided on amid this world of realities, of catastrophes, of tumult, of noise, with the sons of my dreams, *Chactas, René, Eudose, Al-*

cuhamet, and with the daughters of my fancy *Attala*, *Amelia*, *Clanca*, *Celléda*, *Bymodoce*—forming part, yet without the pale of, my age, I perhaps exerted over it without knowing or seeking for it a triple influence, religious, political, and literary.

I have only round me now four or five contemporaries of a long lived fame. Alfieri, Canova, Monti, have passed away. Of that bright galaxy, Italy retains only Piedmonte, and Manzoni. Pellico sighed away his best years in the dungeons of Spielberg. The genius of the country of Dante is doomed to silence, or forced to languish in a foreign land. Lord Byron and Mr. Canning died young. Walter Scott seems about to follow; Goethe, covered with years and glory, has sunk into the tomb. France has none left of that glorious age; she is beginning a new era, while I remain to bury my age, like the old priest at the storming of Bezieres, who was to ring the bell to announce the fall of the last citizen, before he himself died.

When death drops the curtain behind me and the world, it will be found that my drama contains three acts. From my early youth until 1800 I was a soldier and a traveller; from 1800 until 1814, under the Consulate and the Empire, my life was a literary one; from the Restoration until the present day my life has been a political one. In my three successive careers, I imposed upon myself a great work.—As a traveller, I aspired to the discovery of the polar regions; as a literary man, I endeavored to re establish religion upon its own ruins; as a statesman, I endeavored to give to the people the true representative monarchical system, with its various privileges. I at least helped to conquer that which is worth them all, which does away the need of a constitution—the liberty of the press. If I often failed in my undertakings, it was the fault of my destiny. The foreigners who succeeded in their designs, were seconded by fortune; they had powerful friends and a quiet country to back them: I was not so fortunate.

Of all the modern French writers of my day, I am the only one whose life and travels at all assimilate. Traveller, soldier, poet, legislator; it was among forests that I sang of forests, on board ship that I described the ocean, in exile that I learned what exile meant, in courts, public affairs and conclaves that I studied princes, politics, laws and history. The orators of Rome and Greece mingled with the current of public affairs, and shared its fate. In Italy and Spain, at the time of the middle ages, the very first geniuses of the country participated in all the public feelings and actions. What noble but stormy times were those of Dante, Tasso, Camoens, Ercillo and Cervantes.

In France our ancient poets and historians wrote amid the tumult of battles and the weariness of pilgrimages. Thibault, Count of Champagne, Villehardouin, and Joinville, borrowed from the incidents of their times materials for their romances. Froisard sought for history on the highways, and learnt it of the *Chevaliers* and *Abbés* with whom he met and journeyed. But dating from the reign of Francis the 1st., our writers have been recluses, whose talents might express the spirit, but not the facts, of the age.

If I am destined to live, I will represent in my person what will be represented in my memoirs, the principles, the ideas, the events, the catastrophes, the *epopee* of my age, for I have seen the beginning and the end of a world, and the differing characteristics of this beginning and end often mingle together in my opinions. I found myself between the two ages, as if at the confluence of two large streams; I plunged into their troubled waters, leaving with regret the old shore which gave me birth, and swimming with high raised hopes towards that unknown strand where lands each new generation.

These memoirs, divided in books and parts, have been written at different times, and in different places; these sections naturally require a sort of prologue, which recalls the events that have occurred since the last dates, and notifies where I again take up the thread of my discourse. The various events and the changing destinies of life, are thus strangely mingled together. It sometimes happens that amid my prosperity I am forced to speak of days of misery, and that again in the midst of grief and tribulation, I am carried back by circumstances to my bright days of happiness.

The different feelings of my different ages, my youth mingling with my old age, the gravity of my experienced manhood clouding the sunshine of my lighter years, the rays of my sun from its rising to its setting crossing each other like the scattered rays of my own life, give a sort of indescribable unity to my whole work. My cradle partakes of the nature of my tomb, my tomb of that of my cradle; my sufferings become pleasures, my pleasures pain; and no one can tell whether these memoirs were the offspring of a young or an old head.

I do not say this to praise myself; for I do not well know whether it is praise-worthy; I only state what is true; what has happened without my knowledge, was owing to the inconstancy of the storms which have assailed my bark, and which often have left me no place where to write this or that paragraph, but the very rock which has caused my shipwreck.

I have revised these memoirs with a sort of paternal affection. I should like to call upon the dead to correct the proof sheet. The dead go quickly.

The notes which accompany the memoirs are of three different kinds. The first, which are put at the end of the book, contain the illustrations and justifications. The second, at the bottom of the pages, refer to the actual time at which the memoirs were written. The third, also at the bottom of the pages, have been added since the memoirs were written, and bear the date of the time and place at which they were penned. One or two years of perfect quiet, in some obscure corner of the earth, would enable me to finish these memoirs; but I have never been perfectly quiet, except during the nine months I slept in my mother's bosom; and I suppose I shall never find that repose again until I am in the bosom of our common mother, the earth.

Several of my friends have urged me, even now, to publish my history; but I could not accede to their request. In the first place, I should, in spite of myself, in that case, be less frank and explicit; and secondly, I have always supposed that I wrote as if seated in my coffin. From that circumstance my work has received a sort of religious coloring, which I could not alter without prejudice to the book; it would grieve me to hush that voice from the tomb, which pervades the whole of my memoirs.

It will not, I hope, be thought strange, that I retain some natural weakness, and that I am anxious concerning the fate of the poor orphan which I shall leave behind me on the earth. If Minos thought I had suffered enough in this world to be at least in the other a happy shade, and would grant me a beam of light from the Elysian Fields to gild my last picture, it would at least make the faults of the painter less glaring. Life does not suit me; perhaps Death will do better.

SUMMARY.

Tributes to the character and services of private men, are rare; and therefore, possibly the more valuable. A recent instance of one of these, should be generally commemorated.

A number of most respectable citizens of Philadelphia have presented to the veteran philanthropist, *Mathew Carey*, a service of plate, in testimony of their respect. In they letter accompanying it, they say,

"They have long witnessed the unwearied efforts with which every scheme of private benevolence, and every plan of public improvement, have found in you a zealous and disinterested advocate: and deem *your whole career in life an encouraging example, by the imitation of which, without the aid of official station or political power, every private citizen may become a public benefactor.*"

The following is the inscription on the plate:

To
MATHEW CAREY,
From his sincere friends, as a
Testimonial of their gratitude
For his public services,
And their
Esteem for his private virtues.
July 4, 1834.

The first steam vessel under the British flag, arrived at this port last week, from Halifax via Boston. Her name is the "Cape Breton, of London." Her agent, we understand, has been in the city some days, on business connected with the Mining Company of Cape Breton.

Steamboat Burnt.—The steamboat Walter Raleigh, Capt. Gardiner, on her way from Elizabeth City (N. C.) to Charleston, was discovered to be on fire in the hold, on Tuesday night of last week, Georgetown light bearing S. by W. distance 12 miles. In about five minutes after the fire was discovered, the flames had spread so rapidly that those on board, ten in number, were compelled to abandon the vessel and take to the boat, when they were fortunately picked up by the schooner Rice Plant, from Georgetown, and carried into Charleston.

[*From the Boston Daily Advertiser.*]

On Tuesday a fatal accident occurred at Brighton, where the Railroad passes under the bridge, and where the cars usually stop for passengers. Mr. R. M. Bouton, a respectable mechanist of this city, and his wife, came to the place before the storm began, for the purpose of taking seats in the cars on their return to the city. While they were waiting for the cars the shower came on, accompanied with a violent wind. They retreated from the platform provided for facilitating the ascent to the cars, to the opposite side of the Railroad, where they were partially sheltered from the wind and rain, by the abutment of the bridge. The engineer on approaching the place, slackened his pace as usual, but as soon as he came in sight of the platform, perceiving no person there, and presuming that there were no passengers to get into the cars, he again let on the steam and proceeded without interrupting his course. In the mean time Mrs. Bouton, who was standing between her husband and another gentleman, covered by a Buffalo's skin, which they held over them, did not perceive the approach of the engine until it approached very near them. She immediately darted from between her companions, for the purpose of reaching the platform, on the other side of the Railroad when she was knocked down by the engine, which passed directly over her. She fell between the wheels, and was so crushed beneath the lower part of the engine, that her death must have been instantaneous.

Another Railroad Accident.—The Locomotive E. L. Miller, while on her way to town on Saturday last, and when within 52 miles of the city, the axletree of the Tender broke, and coming in contact with the Road, tore it up for a distance of about 150 feet, and threw the Passenger Cars off. The only personal injury sustained was the dislocation of the shoulder of one gentleman. The Locomotive was not at all damaged, but arrived at the Depository yesterday afternoon, at 4 o'clock, with the passengers, among whom was the gentleman that met with the injury, he having experienced as little inconvenience from its effects, as is usual under such circumstances.—[Charleston Courier.]

Casualty.—Last Thursday afternoon, as a canal boat was passing under Genesee street bridge in Utica, a litle girl, about ten years old was discovered on the deck, and on being warned to escape, fled in the direction of the bridge, with which she came in contact, and was knocked down. Her head falling between the bridge and a small cask, was dreadfully mangled, and her death was almost instantaneous.

DESTRUCTIVE TORNADO AT UTICA.—A slip from the office of the Utica Observer, dated the 15th instant, furnishes us with the following account of a violent and destructive tornado at that place:

"Our city was visited yesterday by one of the severest and most appalling thunder storms, accompanied by a complete hurricane of wind, hail and rain, ever experienced by our inhabitants. The storm came up suddenly at half past 4 P. M. and lasted about ten minutes. For a few minutes it seemed as if nothing could withstand its fury. Dry good boxes and awnings in Genesee street were seen flying in the air like the fallen leaves of Autumn; horses were frightened and carriages upset—indeed the whole mass of earthly things appeared to be moving and yielding to its mighty power. The storm abated and the destruction which was so fearfully going on was fortunately terminated. Our streets were flooded with water; and thousands of panes of glass have been destroyed by the force and magnitude of the hail. Throughout the whole extent of damage and destruction of property, however, we are happy to state, no lives were lost, nor any person, surprising as the fact may be, materially injured. Of the amount of damage it is impossible for us to form a correct estimate; probably it will exceed 25 thousand dollars.

The destruction of property has been great, and seems to have been more particularly confined to that portion of our city lying on the highest ground.

NAMES.—A writer in the Illinois Pioneer says, that the following nick-names have have been adopted to distinguish the citizens of the following states:—

In Kentucky, they're call'd Corn-Crackers,
Ohio, - - - Buckeyes,
Indiana - - - Hoosiers,
Illinois - - - Suckers,
Missouri, - - Pukes,
Michigan, T. - - Woolverines.
The Yankees are called Eels.

[*From the National Gazette.*]

An effort was recently made in Paris before the *Tribunal de Premiere Instance*, to deprive Mr. Adrien Hope, a son of the opulent Dutch banker, of the management of his fortune, on the score of unsoundness of mind. The parties who instituted the process, were his mother and step-father, M. and Mad. Berthieux. Among the questions asked him to test his sanity, was one requiring him to tell how many bushels are contained in a *setier*, which he could not answer; but it turned out that no one in the court was able to give a correct reply. On this discovery, considerable laughter was produced by a voice exclaiming, that they should all be declared lunatics. The advocate of the defendant insisted upon the insufficiency of the evidence against his client, and asserted that the suit had been brought by Mr. Berthieux in revenge for the other having thrown off his authority and taken from him the direction of an extensive property. It was finally decided that although there was no adequate reason to justify a declaration of lunacy, the proofs of Mr. Hope's incapacity to manage his affairs were strong enough to authorize the nominating of a guardian.

Poor Adrian Hope, we knew him well, long years ago, in the brilliant promise of his early life, when fortune, genius, and a noble nature, bade fair to make his career one of unmingled honor and usefulness. We knew too that mother—*marâtre* rather—who even then persecuted and embittered the bright days of her brighter son, and who too soon succeeded in estranging him from his family, though she could not deprive him of his inheritance.

Adrian Hope is the youngest son of Wiliams Hope, who was for many years at the head of the famous house of Hope & Co. of Amsterdam. His father, in dying, left to the elder son, Henry, who labored under some taint of hereditary insanity, a larger share of fortune than to Adrian; but the share of Adrian, curtailed as it was, was yet princely. After residing for a while in Sweden, as the Chargé d'Affaires of Holland, Adrian went to Paris, and there, for many years, he has, we have long known with pain, been wasting himself and his means in the inglorious dissipations of that capital. The catastrophe which has fallen on many of his name before, now seems to have overtaken him.

Letters received at Washington from the West, mention that the regiment of Dragoons, which some weeks ago left Fort Gibson on an excursion into the interior, had been heard from as late as the 3d of July, at which time they had reached a point on the False Washita, 120 miles above Fort Towson.

The Governor of Connecticut has designated the first Monday in October for the choice of three members of Congress, to supply the places of Messrs. Foot, Ellsworth and Huntington.

Messrs. Foot and Huntington have been appointed Judges; Mr. Ellsworth returns to the bar. They have all deserved well of their state and county, and may we trust have, not less worthy successors.

March of Intellect at Rome.—I went the other day to the Church of the Gesu, and heard a priest discourse, very much to his auditors' comfort, about the best means of eluding justice, and not less to his own, being well defended at both ends by a black square cap and an arm-chair. You may form some idea of the state of illumination in which the people are here, just under the sky-light of holy Mother Church, when I tell you of what the discourse consisted. A relation of three miracles (no doubt by the way of hints for use to the audience) which rescued as many convicts from the secular arm. I noted down the last two. One was of a prisoner whose chains fell off at his prayer, (so the priest averred, but did not say whether or not by the aid of a file, and for whom a double door flew open, of its own accord necessarily (as we know how delicate convicts are about injuring the carpentry of a jail-house.) The other was of a tough subject, who broke the rope which had hanged "so many before him" (what an Epicurean!)—with a bran new one to boot—upon which the mob shouted, *a miracle!* and the probationer was let loose, either on account of the strength of his neck or his piety. Much stress was properly laid on the second rope being bran new ("*tutta nuova—fune buonissima e fortissima;*") and complete satisfaction with the discourse was painted in every visage, especially that of the preacher.—Thus proceeds the March of Intellect at Rome.—[Letter from Rome, in the Athenæum.]

The following is the conclusion of the visit, by the American Commisioners, to the Grand Pawnees.

The writer tells us in a private note, that "the account of the Council is not as full as might be, owing to the loss of some of his notes." It will, however, be found very interesting.

We observe that several journals have ascribed these sketches to *Washington Irving*, and the Baltimore American, in particular, publishes the last under that gentleman's name. Much as we we are persuaded the real author must be flattered by this mistake, yet it is only just to him—whom we are not permitted to name—to say, that Mr. Washington Irving is *not* the writer of these sketches.

INDIAN SKETCHES, No. III.—Continued from Aug. 1.

GRAND PAWNEE COUNCIL.

The second day after our arrival among the Pawnees was appointed for holding the Council. It was a fine frosty morning; the sun rose like a huge ball of crimson over the tops of the low hills, pouring a flood of lurid light upon the dancing waters of the Platte, gemming with a thousand rainbow tints the sparkling frost beads that glittered upon the tall withering grass of the prairie, and casting a dull, red glare upon the dead trunks of the island trees, which leaned over the stream, reflecting their gnarled and twisted limbs in the broad mirror of the still water, which rested under the lee of the islands.

A number of us had left the lodge early in the morning, and were slowly strolling towards the banks of the Platte. The village was lone and still, save the gaunt, sinewy forms of the Indian wolf dogs, who were prowling through the town in search of food. The savages had not yet left their lairs, except one or two solitary figures, which were here and there seen muffled in their robes, and hurrying swiftly forward to their abodes, to give information to their dusky inmates that the strangers were stirring, and were then passing through the town. Occasionally as we passed the dark, funnel-like mouth of the dwellings, the half of a face might be seen, cautiously looking out from the low covered passage, which lead to the inner door of their lodges, and after staring for an instant at the party, vanishing into the interior to call out the rest of the inhabitants.

We had not proceeded far, before about a dozen half-starved Indian wolf dogs had collected together at our heels, occasionally raising their nostrils and baring their long white fangs just sufficiently to give vent to the deep ill natured growl which came rumbling up from their chests—while their green flashing eyes, their long bristling hair, and their tails stiffly extended, as they slowly stalked after us, convinced us they waited only for the slightest appearance of fear on our part to commence an attack, and at the same time plainly shewed that however welcome our appearance might be to the Indians themselves, there were still some members of the village who did not participate in the general feeling of joy.

In spite, however, of this show of ill will, we continued our walk until we reached the Platte, where we seated ourselves upon the body of a dead tree which lay prostrate on the bank of the river.

In the meantime the Indians, who had received intelligence of our movements, began to edge towards the stream, the children came running openly and in droves around us, while the old men and warriors carelessly sauntered along towards the water, and came down upon us as if by accident, while others even more retiring than these, crouched down in the long grass, creeping stealthily to the spot, until at length every stump concealed a painted form, and every bush was alive with the curious face of the inhabitants of the town, who had stolen from their homes to gaze upon their visiters.

Nearest to us was a tall thin Indian, clad in an old worn out Buffalo robe; there was a "gallows bird" look about him—no doubt some prodigal son disinherited by a crusty old curmudgeon father—he was standing with his back half turned towards us, and his face turned away, apparently gazing up the river, the very attitude to "give the lie" to his eyes, which were convulsively straining towards us from the corner of their sockets, and scanning our every movement with an intense and eager curiosity.

At length one of the party anxious to gain some information respecting the disposition of our horses, beckoned him forward: this was a signal for all the rest, who came trooping up from all quarters, to gratify their curiosity, under the pretence of giving information; and upon every sign made by us, about twenty tongues gabbled off their answers, at a rate not altogether intelligible, especially to persons most profoundly ignorant of every syllable of their language.

After spending about half an hour upon the banks, and finding that nothing was to be gained in the way of information from them, we turned off in the direction of the village.

The town, which we had left silent and apparently desolate, was now humming with life; the warriors had collected around in small knots of five and six, and by their vehement gestures were apparently engaged in earnest conversation—the children were rolling and tumbling in the dirt—the squaws were busily engaged in bringing from their lodges large leather sacks of shelled corn—others were spreading it out to dry upon the leather of their buffalo skin tents, which had been stretched out upon the ground for that purpose—some were busily engaged in cleansing from it the decayed kernels and packing it up in small sacks of a whitish undressed leather, resembling parchment, and others were employed in depositing these in their cach-holes,* for a winter's store.

In another direction, at a distance from the village, a band of Indian females were slowly wending their way along the top of one of the low prairie ridges, to their daily labor in the small plantations of corn, which are scattered in every direction around the village wherever a spot of rich black soil gives promise of a bountiful harvest; some of these are as far as eight miles distant from the town.

There is a fearful uncertainty hanging around the lives of these females. At the rising of the sun they depart to their toil, often to never to return, being constantly exposed to the attacks of lurking bands of hostile tribes, which steal down upon their villages, cutting off indiscriminately, man, woman or child, that happen to fall in their grasp, and disappearing with equal silence and celerity, their presence being unknown until the long absence of a friend or a mutilated body found sometimes after the lapse of several days, conveys to their friends a thrilling token that the hand of the destroyer has been busied among them, and the hour of vengeance has passed.

As we proceeded on our return, we were again followed by a committee of the dogs of the town, who formed in a train behind us, with the same expression of ill feeling as had been manifested by their predecessors. But this last display of rancour was of short duration, for a stout tattered Indian, who looked as if his last ablution had been performed during his infancy, rushed out from the mouth of one the lodges and with a few vigorous applications of his feet changed the prospect of affairs. In an instant the flashing eyes of the curs sunk from fury to meekness, the hair which bristled boldly up was sleeked quietly down to their backs, the tails which had stood out as erect as bars of iron, were tucked snugly away between their hind legs, and the mouths of several who had been very liberal of their snarls and growls, and who had been very severely handled for this expression of ill will, were now widely opened in a yelling remonstrance against the indulgence of that ill will in any save themselves—in short, they were most unmercifully beaten, and fled yelping and howling in every direction.

In another quarter, our attention was called to the long, lean, wiry forms of the old heralds, who were now stalking through the town, calling forth the warriors, and exhorting them to prepare for the Council, and occasionally stopping in their journey, to take a short gossip with some old gray-headed crony, who stood blinking like an old time-worn owl from the entrance of his dwelling, or else pausing to bestow a little wholesome advice upon some wild urchin who had been guilty of a delinquency, or detected in the transgression of some rule of decorum towards their guests.

Upon reaching the lodge of the chief, we found that active preparations had been made for holding the Council. The goods and presents which had been received hastily into the building were now piled carefully up; the lodge had been cleanly swept; a large cherry fire was crackling in the cen-

* The *cache* is a large hold dug in the ground like a cistern: they are narrow at the top, (about three feet in diameter) but widen as they descend, until their form somewhat resembles that of a jug; they will contain about one hundred bushels of corn.

Upon leaving their villages the Indians deposit their corn, which is to serve for their winter's store, in these granaries and cover the aperture with earth, so that it is impossible for a person unacquainted with their exact position to discover the entrance. The name cash or cache is given by the French traders who derive it from the word cacher (to conceal.)

tre; the rabble crowd of loungers and hangers-on had been routed; and besides the family of the chief, we were the only occupants of the spacious building.

Mid-day was the time appointed for the opening of the Council, and at that hour the Chiefs and Braves began to assemble. They were full dressed for the occasion. Many of the younger warriors had spent the whole morning in preparation, and now presented themselves, fully ornamented for the meeting. Every wrinkle, every bone, and every muscle in their swarthy faces, was strongly and glaringly "set out" in vermillion, or else covered with long white stripes, produced from a species of clay abounding in the neighborhood.

As the hour for the opening the Council grew nearer—the lodge began to fill, the tall muffled forms of the warriors now poured in, in one continuous stream, moving without disturbance to the place allotted them and seating themselves in silence around the chief, according to the rank which they held in the tribe. There was no wrangling, or bustle for precedence, each knew his station, and if perchance one of them had occupied the place of some more distinguished warrior, upon his appearance he immediately rose from his seat and sought elsewhere for one more suited to his own rank.

The crowd continued, flowing into the interior until the lodge was filled almost to suffocation: as they came in they had seated themselves in circles around the chiefs until five or six had thus been formed one beyond the other, the last being ranged around against the wall of the building. In the ring nearest the head chiefs, were seated the principal chiefs and braves, or those warriors whose deeds of blood had entitled them to a high rank in the councils of the nation. The more distant circles were filled by a few of the young men of the village who were admitted to the council, while the passage which led to the open air was completely blocked up with the tight wedged mass of women and children, who had thus ventured as near as they dared, to mingle in the deliberations of the tribe.

In the course of half an hour, nearly all the principal warriors had assembled. The chief then filled a large stone pipe, and lighting it, drew a few puffs himself, inhaling the smoke into his lungs, and blowing it out in long blasts from his nostrils: he then passed it to the whites, who, each having inhaled a few whiffs in their turn, handed it to their neighbors; who again passed it on, until it had made the circuit of the whole assembly. While this was going on, our attention was attracted by a violent commotion in the passage leading into the lodge, and in a moment afterwards, the naked head and shoulders of the Wild Horse (mentioned before) towered above the crowd: he forced his way through them, and burst naked into the building, where he seated himself in the inner ring, leaning his back against one of the pillars which supported the roof of the lodge. The chief scowled grimly at the disturbance caused by his entrance—but he was a giant, whose wrath was not to be courted, and the matter passed off in silence. After a short time had elapsed, Mr. E—— rose and addressed the Council, stating the views of the Government, and at the same time the conditions of the treaty.

During the whole of the address every sound was hushed into a deep and thrilling silence—not a form stirred; but all sat with their eyes steadily fixed upon his countenance; there was not even a long drawn breath to break in upon the voice of the speaker, as it floated through the lodge—save now and then, when some proposal, which met with their peculiar approbation, would elicit an exclamation, or rather a loud grunt of approval, from the deep sounding chests of the whole assemblage.

When Mr. E. had finished his address, the chief of the Grand Pawnees rose and folded his heavy buffalo robe around his body; his right arm and breast were left bare, while the other hand and the lower part of his body were completely hid by the dark folds of his shaggy mantle. For a few moments he stood facing Mr. E. in silence; then stepping forward—his chest seemed to swell out—he threw back his head, and raising his arm with one of the fingers slightly extended as if to command attention—he paused and gazed with a hawk eye upon the iron faces of his warriors. The pause and glance were both momentary; for without moving the position of his arm he commenced his harangue. It was short, energetic, and abounding with all the high wrought figures of Indian oratory. As he proceeded, he grew more and more animated; his chest rose and fell; his finely modulated voice, which at first had stolen like music over the stillness, now grew louder and louder, until its deep fierce tones rang like thunder through the building. He threw his robe from his shoulders, leaving bare his almost convulsed frame; he fixed his eagle eye upon us, and extending his bare arms towards us he waved them over our heads with a wild fury of gesticulation, which, but for the words of friendship which accompanied them, would have led us to fancy him some demon pouring out upon us the most fearful threats of vengeance. For about ten minutes his voice rolled through the lodge, when he suddenly fell from the loud energetic language which he was then using to the usual silvery gutteral tones which were natural to him, and in a short time he finished his harangue.

After him rose up his son, the second Chief of the tribe, and commenced his address. While he was proceeding, a noise had arisen at the extreme part of the lodge, near the passage. At first the voices had been low and smothered, but at last they broke out into a loud and angry altercation. At the early part of the disturbance, the Wild Horse was crouching at the foot of one of the pillars, with his hands interlocked with each other, his arms encompassing his legs, and his body nearly hid by the long matted hair which hung down over it. At first he contented himself by an occasional sharp word addressed to the crowd, which for a few moments would hush up the disturbance; but when the brawling voices broke out into an open clamor, he started to his feet, and stalking like a Hercules among them, he shook his brawny arms over their heads, and a few stern words thundered from his mouth, which had the effect of magic in soothing the angry passions of the disputants. The voices sunk into silence, and the noise was hushed. For a few moments he maintained his menacing attitude over them; then turning his angry face from them, he resumed his station at the foot of the pillar, and the Chief proceeded in his harangue.

When he had concluded, the different Chiefs rose up and addressed the party, welcoming them to their homes, with the kindest expressions of hospitality; and at the same time expressing their entire acquiescence in the terms of the treaty. After them several of the braves and warriors arose, and spoke to the same effect; and when they had concluded, the following day was appointed for signing the treaty. The pipe was again passed round, and the Council breaking up, the warriors left the lodge.

During the whole time of the deliberation, which lasted about six hours, the interior of the building had been excessively hot; and the instant it was cleared, we strolled out into the open prairie. At a distance there was a large crowd gathered together. We went towards it, and found that they had assembled to witness the slaughter of one of our oxen, the destined victim for the ratification of the treaty. The hunter who was to enact the part of butcher, had loaded his rifle, and now moved forward. The crowd, who had an apprehensive dread of fire-arms, spread off in a wide circle around, leaving the animal alone exposed to his view. The beast, who then for the first time seemed to have a suspicion of the fate that awaited him, held up his head, and gazed steadily at the hunter. He took a few steps—the trigger clicked—the gun was to his cheek—we heard the bullet strike; the sharp report echoed through the town; and the next instant the beast reared his heavy frame erect in the air, and fell forward on the ground; but the ball had not done its duty—it had fractured the skull without being fatal. By degrees, the animal raised himself from the ground, upon his haunches. His head hung heavily forward, and there was a thin wavy streak of blood trikling down from the bullet hole in his forehead. Still he feebly supported his form upon his tottering four feet, his huge body rocked to and fro in the last extremity of anguish, while the deep moaning bellows which burst from his heaving lungs, almost resembled the tortured cries of a human sufferer. But this was soon over, a second time the hunter advanced and fired, the ball was fatal, it crushed through the bone of the skull, and the beast fell forward with a deep groan. The crowd, raising a loud cry of exultation and delight, closed around him. We had seen it all; it was sickening; we turned away and left the Indian butchers to their work.

☞ **TOWNSEND & DURFEE**, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines. and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, *Flat Bars* in
200 do. 1¼ do. ¾ do. lengths of 14 to 16
40 do. 1½ do. ¾ do. feet counter sunk
800 do. 2 do. ¾ do. holes, ends cut at
800 do. 2½ do. ¾ do. an angle of 45 degrees with splicing plates, nails to suit.
soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2⅛, 2⅜, 2½, 3, 3½, 3¾, and 4 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norris. Railroad:

m1 1y

A POETICAL GEM.—The following lines are from the Album of the hotel in the vicinity of the Falls of Niagara:

NIAGARA.

Flow on forever in thy glorious robe
Of terror and of beauty. God hath set
His rainbow on thy forehead, and the cloud
Mantles around thy feet. And he doth give
Thy voice of thunder, power to speak of him
Eternally, bidding the lip of man
Keep silence, and upon thy rocky altar pour
Incense of sweet praise.

(Signed) LYDIA H. SIGOURNEY.

Tuesday evening, Aug. 5th, 1834.

THE SLEEPING CHILD.—BY LEIGH HUNT.

A brook went dancing on its way,
From bank to valley leaping,
And by its sunny margin lay
A lovely infant sleeping.
The murmur of the purling stream
Broke not the spell which bound him,
Like music breathing, in his dream,
A lullaby around him.

It is a lovely sight to view,
Within this world of sorrow,
One spot which still retains the hue
That earth from heaven may borrow;
And such was this—a scene so fair
Arrayed in summer brightness,
And one pure being resting there
One soul of radiant whiteness!

What happy dreams, fair child, are given
To cast their sunshine o'er thee?
What cord unites thy soul to Heaven,
Whose visions glide before thee?
For wandering smiles of cloudless mirth
O'er thy glad features beaming,
Say, not a thought—a form of earth
Alloys thine hour of dreaming!

Mayhap, afar on unseen wings,
Thy sinless spirit soaring,
Now hears the burst from golden springs,
Where angels are adoring,
And, with the pure hellacal throng,
Around their Maker praising,
Thy joyous heart may join the song
Ten thousand tongues are raising!

Sleep lovely babe!—for time's cold touch
Shall make these visions wither;
Youth—and the dreams which charm so much,
Shall fade and fly together.
Then sleep! while sleep is pure and mild,
Ere earthly ties grow stronger,
When thou shalt be no more a child,
And dream of Heaven no longer.

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by
A12 tf D. K. MINOR & J. E. CHALLIS.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring farther information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy, N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 222 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

J23 1am H. BURDEN.

G. LANSING, *Engraver on Wood,*
35 WALL STREET.

☞ All kinds of Machinery correctly drawn, and neatly engraved. M4

MECHANICS' MAGAZINE.

THE third Volume is now ready. It consists of 384 pages of letter press, and is illustrated by nearly 150 engravings on wood, spiritedly executed, and a full length portrait of LAFAYETTE, on copper, as a frontispiece.

The following are a few only of the numerous notices taken of the Magazine, by gentlemen connected with the press in different sections of the country:—

A rapid glance at its contents discovers that it contains the same judicious preparation of materials that has hitherto distinguished the publication. There are a number of articles, essentially valuable from the solid information embodied in them, and others, again, that will recommend themselves at once to the less severe reader, who always looks for some entertainment to be mingled with instruction.—[N. York American.]

The theoretical and practical Mechanic will find a mine of useful information in these pages.—[Mercantile & Advocate, N. Y.]

This periodical really deserves credit for the ability and attention with which it keeps pace with the mechanical improvements of the age. It is, we see, edited by Mr. Knight, late of the London Mechanics' Magazine, a work which did more to elevate the state of knowledge among the working classes, than any other in England.—[Commercial Advertiser.]

It is stored with representations and descriptions of improvements in machinery, and of newly invented articles, together with information valuable to every class of citizens.—[U. S. Gazette, Philad.]

It contains information on almost every subject connected with mechanics, and a register of inventions and improvements.—[Montreal Gazette.]

It is a work well worthy the attention of every mechanic and one which affords to genius a chance of exhibiting talents.—[New Orleans Merc. Adv.]

This is a publication of practical value and of deserved popularity.—[Albany Argus.]

The work needs only to become known to insure it a very extensive circulation. It certainly cannot fail to be highly interesting and useful to the numerous class of persons for whom it is particulary designed.—[Paterson Intelligencer.]

There is no periodical in this country which more deserves the patronage of the mechanic than this, and which will better repay him for the expense incurred and the time spent in its perusal.—[Elmyra Gazette.]

We wish we could persuade our young operatives—upon whose intelligence and virtue so much depends—to substitute the substantial fare which this work affords, for the trash which many of them are too eager to devour.—[N. J. Journal.]

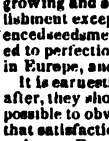
It forms a truly valuable repository, alike suitable to the drawing room and to the cottage.—[Watertown Register.]

Every mechanic who wishes to keep pace with the improvement of the age—to avail himself of the aid which science is constantly bringing to art, should subscribe for the Mechanics' Magazine.—[Washington Spy.]

Having perused the first volume of your journal with much satisfaction, and I trust some profit, I deem it my duty as an old mechanic, to tender you my acknowledgments. * * * * In my opinion, it ought to be owned by every mechanic, artificer and manufacturer of our country; and especially by beginners, and made the study of all their leisure hours.—[Benj'n Russell, one of the oldest mechanics in Boston.]

The Mechanics' Magazine and Register of Improvements is published by the Proprietors, D. K. MINOR and J. E CHALLIS, at No. 35 Wall street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, *in advance*.—JOHN KNIGHT, (formerly Proprietor of the London Mechanics' Magazine,) Editor. JY18 tf

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*, either or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany*.

Franklinville, Baltimore county, Md., August 13, 1834.

To the Editor of the Railroad Journal.

SIR,—In your article on Improved Railroad Wheels in the Journal of the 9th, you speak of me as being the inventor of the plan of the wrought iron rod in the wheels, which is a mistake. It was invented and patented by Mr. Phineas Davis, of the firm of Davis & Gartner, and the only agency I have had in the business, has been to mount Mr. Davis' wheels or axles, for the Baltimore and Ohio Railroad Company, and for other companies, and I am prepared to execute orders for similar work, the wheels to be furnished by Davis & Gartner.

Yours, respectfully, DEAN WALKER.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane. J31 6t

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation. J25 tf

RAILROAD CAR WHEELS AND BOXES,
AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.
SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

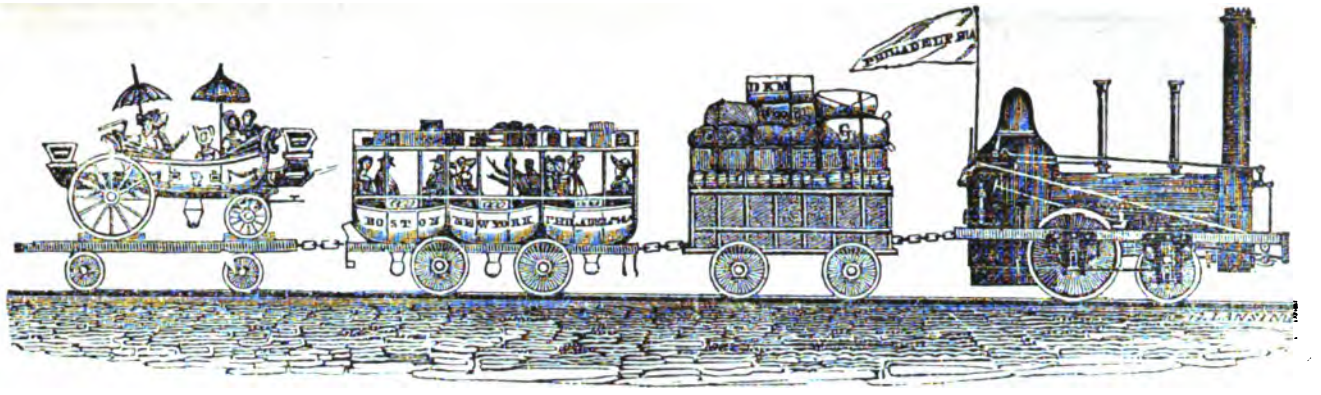
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1832.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, AUGUST 30, 1834. [VOLUME III.—No. 34.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, AUGUST 30, 1834.

Newark Railroad.—We learn that in a few days this railroad will be opened for public use from Newark to Jersey City,—an event which will be hailed with satisfaction by that portion of the travelling public who may have occasion to use it. The constant communication of Newark and the adjacent towns with New-York city, and the large amount of goods transported between these places, render the completion of this work of great importance and interest to the community. It cannot fail, we should think, of proving extensively useful to all concerned in travelling and transportation between this city and that portion of New-Jersey which it intersects; and it will doubtless participate in the patronage now so largely extended to the existing modes of conveyance between the places referred to. The sixth instalment on the stock is payable on the 10th of September.—[Daily Adver.]

New Locomotive Carriage.—A very ingenious machine has been invented and made solely by Mr. Ackrill, of Boston. It is built to accommodate one person, who will, with great ease, be able to propel it at the rate of ten miles an hour. The principle on which it is constructed is entirely new, and may be applied to any purpose in machinery; it is anticipated it will introduce quite a new theory in mechanics.

(*From the New-York American.*)

Mr. Editor,—In your paper of 20th inst., (see Railroad Journal, page 513,) a notice appears from the Chairman of the Committee appointed by the citizens of Utica, calling a Convention to meet in that place on the 11th September next, to consider the project of a ship canal from Lake Ontario to Utica, and thence to Albany, and the subject of petitioning the Legislature to undertake the construction of said canal, "as a grand, important improvement, by which the State of New-York will become a fair competitor with Pennsylvania and Canada for the travel and transportation of the Great West, and finally complete that chain of internal improvement which nature has so liberally commenced."

As Delegates are invited to the Convention from this city, it cannot be unsuitable to suggest some things for the consideration of our citizens, before the meeting takes place.

1. The professed object of this stupendous undertaking, as expressed in the notice, is, that this State may become a fair competitor with Pennsylvania and Canada, for the travel and transport of the great West. This, with respect to Pennsylvania at least, sounds strangely enough. Is there any competition between that State and this, for the commerce of Lake Ontario? Will not the Oswego Canal, already opened, accommodate all the business of that Lake, at a far cheaper rate than so costly a work as that now proposed could possibly do it? Is Lake Ontario the point at which competition, either with Pennsylvania or Canada, for the travel and transport of the great West, is to be met? Is it at all probable, that any more travel from the West to this city would take the route in question, in consequence of a steamboat or ship canal being opened to Oswego? And as to the travel from this city to the West, is there any danger of its being drawn around through Canada? Or is it any-ways likely that the products of the West, after being subjected to the expense of transit on to Lake Ontario, will be diverted to the Hudson by a ship canal, in preference to the cheaper means of conveyance already provided?

2d. This project doubtless appears plausible to those who reside on the proposed route, and probably it seems to them to be the only alternative—the only "improvement" by which the State can secure the travel and transport of the great West; but to those at a distance, and especially in this city, it must appear to fall far short of the object. It does not reach the point where this competition must begin, and where the route of travel and transport must be determined, viz. on the waters and southern shore of Lake Erie. Nor is it in the nature of such an improvement, nor of any water communication whatever, not even of a ship canal from Albany to Buffalo, to obviate the existing and growing difficulty in respect to the competition of this State for the travel and transport of the western States. This competition cannot be successfully maintained against more southerly routes, nor even against Canada, *without a medium of rapid communication to this city, which shall be open and in use throughout the whole year.* No enlargement or multiplication of canals from the upper waters of the Hudson to Lake Ontario, or Lake Erie, will answer the purpose, for they can be used only during a portion of each year. The travel and business of the west cannot wait on the rigor of our winters, and unless we provide other facilities than such as are rendered unavailable by frost, a fair competition with our neighbors will be impracticable.

3d. It surely behooves the citizens of this metropolis to consider how the travel and business of the Great West is hereafter, in the progress of a most active and far reaching competition on either side, to be drawn directly hither. While our enterprizing fellow-citizens at the North are contriving how to increase the facilities of communication between the western world and Albany during the summer months, it is time for us to consider how the obstacles of climate and distance may be obviated with respect to this city throughout the year. If they have the energy and courage to contemplate a ship canal of one hundred and fifty or two hundred miles in length, may we not venture to look somewhat seriously at the map, and consider the subject of the railway through the southern counties to Lake Erie, of the route of which a survey is now in progress? Is it not time to realize that the distance hence to the lake by this route is but a trifle greater than that from Albany to Buffalo, and that by a railway all that is wanting to us in respect to the present or future competition for the travel and transport of the western world would be supplied?

The writer is of opinion that facilities of cheap and rapid communication ought to be extended through every district of this State which is not already favored in that way; and if, after that, the projected ship canal is needed, let it by all means be constructed. But will any reasonable man say that the next effort of the State should be to add, on such a scale, to the advantages already so liberally extended to that route? Is it not reasonable that the interests and claims of other sections should, in their turn, be considered and fairly dealt with; and among them the vast and enduring interests of this city in the commerce of the West, which every one perceives will now be in a great measure lost to us, without a medium of communication which will serve for the winter as well as the summer months.

Pearl Street.

A daily mail has been established between Trenton and Bordentown, to meet the great mail between New York and Philadelphia.

ALLEGANY RIVER.—We copy from the Kittanning (Pa.) Gazette, the following very interesting article upon the Allegany River, a river which has been heretofore, and indeed is *now*, greatly undervalued. The time is not distant, however, when it will be duly appreciated, and profitably used.

In the present contest for the trade of the west, the Allegany River is an object of great and constantly increasing interest; and that it will ere long become an important avenue of trade, no one who watches the signs of the times will for one moment question. New-York has her eye upon it; for she well knows that unless she can reach the Ohio River by some more direct route than by way of Lake Erie and the Ohio Canal, she must give up the immense trade of that river to Pennsylvania. Her projected canal from Rochester to Olean may therefore be calculated on; and when that is accomplished, the Allegany will rise in the scale of importance to be second only to the Ohio itself.

Firmly persuaded of the truth of what we have here stated, we shall venture to offer to the world a more minute description of this river than has yet been given.

Its source is in Potter county, Pa., from whence it flows in a north-western direction about forty miles, when it enters the state of New-York, at the south-east corner of Cattaraugus county, having in that distance received many tributaries, and become a large stream. About fifteen miles from where it crosses the state line, it receives Olean creek, a considerable stream from the north. Olean or Hamilton village is situated at the mouth of Olean creek, and will doubtless become an important place. From Olean the course of the river is a little north of west, for about thirty miles, when it changes to south-west, and soon after re-enters Pennsylvania, at the north-east corner of Warren county. From thence its main direction continues the same until it receives French creek, one of its largest tributaries, from the north-west: it then changes to south-east, and so continues to the mouth of the Mahoning, where it again changes to south-west, which course it retains for the most part until it unites with the Monongahela at Pittsburg, and where it loses its name in that of the Ohio.

In its course it flows through the following counties: Potter, Pa., in which it rises, M'Kean, Pa., Cattaraugus, N. Y., through which it flows a distance but little short of fifty miles—Warren, Venango, Armstrong, and Allegany, in Pennsylvania.

It receives in its course many large tributaries, the principal of which are—the Oswaya creek, above Olean, the Olean, Tanungwant, (or Tonnewanto,) Great Valley, and several others, in Cattaraugus county; Kenjua, Connewango, and Brokenstraw, in Warren county; Tionesta, Oil creek, and French creek, in Venango county; Clarion river, or Toby's creek, between Venango and Armstrong; Mohulbuctetem, or Redbank creek, and Mahoning, in Armstrong county; and the Kiskiminetas river, between Armstrong and Westmoreland. All the streams here enumerated are navigable to a greater or less distance. No navigable stream enters the west side of the Allegany below French creek.

The following are the distances from Pittsburg up, by the course of the river:

From Pittsburg to	Miles.	Miles.
Kiskiminetas river,	29	29
Town of Kittanning,	11	43
Mahoning creek,	9	52
Redbank "	10	62
Clarion river, or Toby's creek,	21	83
French creek (town of Franklin)	32	115
Oil creek,	7	122
Tionesta creek,	18	140
Brokenstraw creek,	28	168
Connewango, (town of Warren,)	8	176
New-York line,	18	192
Great Valley creek,	27	221
Olean,	18	239
Source of the Allegany, about	60 say	300

Nearly all the large tributaries of the Allegany interlock with other waters, whose outlet to the ocean is far distant from that of its own. Potter county gives rise to the Allegany, a tributary of the Mississippi, the Genesee, a tributary of the St. Lawrence, and to some of the head waters of both the north and west branches of the Susquehanna. Oswaya and Olean creeks interlock with the branches of the Genesee, and the valley of the latter is to be the route by which the contemplated canal will reach the Allegany. Olean and Great Valley creeks interlock with Cattaraugus creek, a large stream, which falls into lake Erie, some forty miles south-west of Buffalo. Connewango creek is the outlet of Chautauque lake, a fine body of water, near twenty miles in length, the upper end of which approaches to within eight miles of lake Erie; its elevation above the latter, hower, is very considerable. One or two steamboats ply regularly on Chautauque lake; and it is said that no other steamboats in the world float at so great an elevation above the level of the sea. There is something sublime in the idea that steamboats are navigating a tributary of the Mississippi, two thousand five hundred miles above its mouth, and that tributary only divided by an isthmus of eight miles from another inland navigation of more than two thousand miles. French creek also stretches its arms to the vicinity of the lake, and is probably the best route for a water communication between the Ohio and that important inland sea. Clarion river and Redbank creek both interlock their branches with those of the Susquehanna, and many intelligent gentlemen who are well acquainted with the country at their heads, are firmly persuaded that an unbroken water communication between the Allegany and Susquehanna can yet be made through one of these streams. The Kiskiminetas is well known as the route of the western section of the Pennsylvania canal from the base of the Allegany mountain to its junction with the Allegany river.

We have been thus particular, because in this remarkable feature lies the chief importance of this river. It seems as if the Author of Nature, in stretching its branches in so many different points towards the great eastern and northern channels of navigation, was inviting man to avail himself of the incalculable advantages to be derived from an unbroken communication between them and those of the west. It is, in fact, the key of the valley of the Mississippi; and the day will come when the commerce of half the Union will be here concentrated—when boats from the Lakes, the Hudson, the Delaware, and the Chesapeake, will here mingle with those from every part of the vast and fertile regions of the west.

The general features of the Allegany are peculiar, and in some respects remarkable. For the greater part of its course it flows, not through a *valley*, like most other rivers, but through a great *ravine*, from one to four hundred feet below the common level of the adjacent country. From about the middle of Armstrong county downwards, it is true, there are many fine bodies of alluvial land—on one of which this borough is located—but from that upwards, precipitous hills for the most part jut close to the water's edge on both sides of the river. The scenery is, in some places, wild and rugged, though more generally picturesque and beautiful—for the hills, though steep, are covered with a heavy growth of forest trees, presenting the appearance of a vast verdant wall on either hand—while the pure, limpid water of the river, alternately purling over the pebbly ripples and sleeping in deep intervening pools, completes a scene the beauty of which is rarely equalled.

Another peculiarity of the Allegany is the regular succession of alternate ripples and deep pools. The ripples are generally short, and the descent considerable, over which the water flows with a smooth but rapid current, though not so swift but that a steamboat of light draft and ordinary power can ascend them without difficulty, as has been done repeatedly. The current in the pools is very gentle at low water, but during high water it becomes very nearly uniform. Although the river seems to have worn for itself its present depressed bed, by cutting through various horizontal strata of rock, yet there are no rocks, strictly so called, in its channel—nothing but round pebbles. The ripples are composed exclusively of these, apparently scooped out of the pools above. The flat unbroken rock is in seme places found in deep water. It follows, of course, that the navigation of this river is unusually safe.

No river is better adapted to improvement by artificial means than the Allegany, either by a succession of low dams and locks, or by merely concentrating the channel upon the ripples, so as to give sufficient depth of water at all seasons for steamboats. When it is remembered that a steamboat did regularly ply upon it between Pittsburg and Warren for a considerable time, even when the water was quite low, and that in one instance it ascended to Olean, it will readily be admitted that a very slight improvement would render it an excellent steamboat navigation.

The mineral wealth of this river is another important consideration. Bituminous coal, in exhaustless quantities, extends as far up as Clarion river, and some even higher up. *We believe (and we are not alone in this opinion) that the day will come when the trade in this article alone will be of sufficient importance to warrant the construction of navigable communications from this river to lake Erie and to the New-York canal, were there no other trade.* We shall merely add that it could be delivered on board of boats for two and a half cents per bushel, and leave others to fill out the calculation for themselves.

There are along the Allegany and many of its tributaries immense forests of white pine, from which the Ohio country draws almost its entire supply of lumber. It forms a large and important trade.

Iron also abounds along the Allegany, and is manufactured in considerable quantities.

INTERNAL IMPROVEMENTS. — The projected Grand Belt of the Union, or the connection of the vallies of the Tennessee and Mississippi, by a railroad with Washington and the Atlantic cities, is now in progress. We will endeavor to show that by fostering and supporting the same principle of internal improvement, the valley of the Mississippi, and particularly the city of New-Orleans, has advantages vast and important to gain by it. We will only instance one circumstance, which is the improvement of the navigation of the Red River, being in progress also under the superintendence of Captain Shreeve, with his snag boats, for the removal of the Great Raft, as also snags, logs, &c. which when done (for it is practicable, and can be done at a reasonable expense,) its channel will be deepened, and through the general course of the river it will be brought into narrow bounds, and reclaim millions of acres of as fine land as are in this or any other country. Then we should have steamboat navigation even past the centre of our continent (westwardly) from the Atlantic to the Pacific ocean, and probably from 1000 to 1800 miles, above the Raft. We should not only give facilities of intercourse and transportation to an immense extent of our own territory, but would open a trade to the internal Mexican States for the supply of merchandize for at least one million of inhabitants already located there. Our domestic manufactures

would embrace the larger portion. Those inhabitants are now supplied from Metamoras, St. Louis, and also in and through Calefornia, on the Pacific, (those that pass through the latter are a greater portion imported direct from India.) It will be perceived that the route by the Red River would monopolize nearly all the trade to an extent of territory embracing at least 1600 miles square above the Raft, and nearly the whole of the productions of this vast region would find an outlet by the same channel, such as silver, gold, copper, hides, furs, peltries, cotton, sheep's wool, &c. This line or route would be in connection with the Rio Colorado of the west, which empties at the head of the Bay of Calefornia, and is or may be navigable for steamboats for a long distance.

How happily those natural channels, by the small assistance of art, are calculated to improve the condition of our own citizens as well as the citizens of the Mexican States, and why will it not be the governing principle or regulator between the two nations, that will cause each to be just and at least friendly to the other. For instance, the great extent of Mexican territory that will be dependent on the outlet via Red River and the Mississippi for their productions, as well as greatly facilitating the introduction of merchandize, the key of which is entirely within our territory.

As to the value of the privilege that may be estimated by the Mexican government, we can draw a comparison from our own purchase of Louisiana, for the privilege of an outlet for the productions of the valley of the Mississippi, and who could have imagined, in 1802, that the productions from this valley would have so nearly equalled the exports of the productions of all the other ports of the United States. The first Cotton that was shipped from the port of New-Orleans was, in 1798, 18 bales that were shipped to Charleston, S. C. for a market. The full crop is now estimated for a good season at 500,000 bales, besides 120,000 hhds. sugar, 35,000 hhds. tobacco, as well as all kinds of Northern productions, such as bacon, pork, lard, flour, corn, &c., hides, peltries, furs, &c.

And now, you would ask, where would be our privileges that would be brought to bear on this governing principle or regulation, that would perpetuate those friendly relations between ourselves and the Mexican government. In the first place, it would increase and secure an immense consumption of our domestic manufactures, such as brown and bleached cottons, printed goods, more particularly of the blue dyes, which are preferred to the European, as ours are heavier and the dyes are permanent. But added to these, there is also the long list of innumerable domestic manufactured articles, and in the next place we shall be their importers for all the European merchandize, (I would not wish to infer we would have the duties,) but it would be sufficient for us to do the business of importing and realize a fair profit for our services. But there are other considerations, for instance, the establishment of a regular mail communication from this to the Gulf of Calefornia, whereby we may facilitate our commerce with China and the East Indies, as also in the whaling business, and who knows but that in this age of improvement we may soon, yes, very soon, have an interchange of diplomatic agents with the Japanese, whereby a profitable commerce may be carried on with them. The nearest we approach to it at this time is in the whale fishery, which is pursued near their coast, but not generally even in sight of it.

The above is thus publicly submitted with the hope that it may elicit, from others, a more detailed account of the country, its statistics, as well as all other matters that would pertain to the subject. P. F.—[N. Orleans Bulletin.]

Specification of the Patent granted to James Chesterman, *of Sheffield, in the County of York, Mechanic, for certain Improvements on Machines or Apparatus for Measuring Land and other Purposes.* Sealed July 14, 1829. [From the Repertory of Arts, &c.]

To all to whom these presents shall come, &c. &c. *Now know ye*, that in compliance with the said proviso, I, the said James Chesterman, do hereby declare the nature of my said invention to consist in what is commonly called a measuring tape, in which the cylinder or barrel on which the tape is wound is connected with a strong watch or clock spring, according to the size required, in such manner as to wind up the tape after it has been drawn out, without any effort on the part of the operator. And in further compliance with the said proviso, I, the said James Chesterman, do hereby describe the manner in which my said invention is to be performed, by the following description thereof, reference being had to the drawings annexed, and to the figures and letters marked thereon (that is to say):

Fig. 1.

Fig. 2.

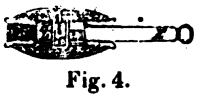


Fig. 4.

Fig. 3.

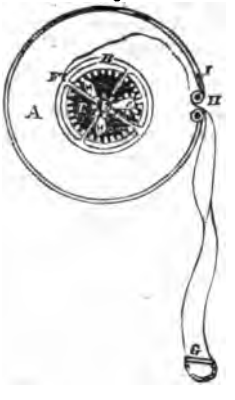


Fig. 1 represents one of my improved measuring machines of a short length, as, for instance, a yard, for which length a simple attachment of the cylinder or barrel on which the tape is wound to an ordinary strong steel spring is sufficient, as here shown. A is the outer case of the machine; B, the cylinder to which the tape is fastened, and which forms also the box of the spring; C, the stud to which the spring is attached, being also the axis on which the cylinder turns; D, the spring coiled round in the box; E, the tape and loop to pull it out by; F, two rollers, between which the tape passes; I, a small bolt which pushes the tape against one of the rollers, and thus stops it at any given length till the bolt is withdrawn.

Fig. 2 is a section of fig. 1, in which similar letters are used to denote similar parts. G is a top or cover screwed down upon the case over the works, to keep the same in their places when the spring is in action.

Fig. 3 represents one of my improved measuring machines of a larger size, and a greater length of tape, for which it is necessary to provide that the tape shall wind up on the cylinder faster than the spring unwinds from the stud or axis, otherwise the spring would be of an inconvenient length; this is effected by an arrangement of cogged wheels, or racks and pinions, as here shewn. A is the outer case of the machine; B, the cylinder on which the tape is wound, and which, in this case, is separated from the box which holds the spring; D is the spring lying coiled in its box, and it will be seen that the box is furnished inside its upper rim with a rack or cogs, which take into the cogged wheel at C, which, in its turn, takes into the pinion E. This pinion is fixed to the four arms of the tape cylinder, B, the axis of which pinion serves to form a stud to fasten the inner end of the spring to the arms. H, H, C, serve to keep the spring in its place while in action. The rest of the apparatus is the same as figure 1. Now it will be seen by this arrangement, that while the tape is drawing out or off the cylinder B, the pinion E will act upon the cogged wheel at C, which cogged wheel, taking into the rack inside the spring box, will wind the spring slowly up, and the cylinder will thus perform several revolutions to one of the spring box. If the tape then be released, the rack attached to the spring box communicates motion to the cogged wheel at C, and thence to the pinion, E, which winds up the tape with the same relative velocity.

Fig. 4 is a section of fig. 3, in which G represents the cover or top of the machine, which part is supposed to be removed in figs. 1 and 3, for the purpose of better showing the mechanical arrangement of the machine.

Now, whereas it is evident that this instrument is susceptible of various modifications both as to material and arrangement, but whereas, I claim as my invention the application of a spring to make it a self-winding instrument, together with the application of two speeds, in order to make the sort of spring here shown answer for long tapes, and also the adjusting bolt, I; and such my invention being, to the best of my knowledge and belief, entirely new and never before used within that part of his said Majesty's United Kingdom of Great Britain and Ireland called England, his said dominion of Wales or town of Berwick-upon-Tweed, I do hereby declare this to be my specification of the same, and that I do verily believe this my said specification doth comply in all respects fully and without reserve or disguise with the proviso in the said hereinbefore in part recited letters patent contained; wherefore, I do hereby claim to maintain exclusive right and privilege to my said invention.—In witness whereof, &c.

Enrolled January 9, 1830.

Age of the World.—We view it as a curious and deeply interesting fact, that all the old poets and philosophers were impressed with an opinion that this earth is of recent production. "Had heaven and earth known no beginning," exclaims one, "but has endured from all eternity, *why have we no poets transmitting to us the knowledge of the great events prior to the Theban war, and the downfall of Troy?*" Lucretius entertained just notions on this subject:

> "If genial nature gave the heavens no birth,
> And from eternal ages rolled the earth,
> Why neither wars nor poets,—sages, tell—
> Till Homer sung how mighty Hector fell?

From the book of Genesis to the last geological surveys, even in New-England, by Professor Hitchcock, there is a chain of positive testimony, which shows most conclusively that the earth which we inhabit has not been in its present condition longer than about six thousand years. Cuvier, the most perfect scientific man of modern days, discovered enough to satisfy his great mind of the truth of all the declarations of the Bible in regard to the first organization of our earth.

On the Location of Railroad Curvatures; being an Investigation of all the Principal Formulas which are required for Field Operations, in laying Curves and Tangent Lines, to pass through Given Points. By J. S. Van De Graaff. [For the American Railroad Journal.]

Art. 1.—When it becomes necessary for a road to pass from a right line into a curve, the former should in all cases be laid tangent to the latter. It is, however, unnecessary, in ordinary roads, to adhere to this principle with the rigor of an accurate geometrical construction; but with reference to a railroad, it should be observed with the greatest care and precision, *as well as the general selection and distribution of the various curvatures.* This is an obvious consequence of the well known law of *inertia*; for any two points being fixed, in the general direction of a route, through which it is proposed to lay a line of railroad composed of several curves and intervening tangents, the cost of construction is in most cases not the only requisite datum to fix the definite location of the intermediate points.

There are, indeed, very few varieties of ground, except in a very broken country, which will not admit of several different lines, connecting the same points, all at nearly an equal expense of construction, and all within the same *limits* of curvature. It therefore becomes an object to make such a selection of right lines and curves, and such a distribution thereof, as will produce, *at a given expense*, the most efficient road.

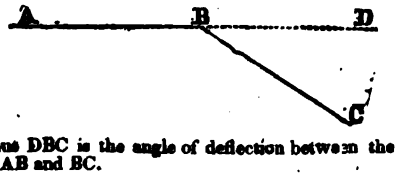
The effect of curvature, upon the *cost of transportation*, does not fall within the present subject; and the only general rules which can, therefore, be here given, as a guide for the arrangement of a line, are the following: Endeavor to open the closer curves by increasing their length, or by increasing the length of some of those which have a greater radius, or by giving some tangent line a different direction. But a sufficient dexterity in the judicious arrangement of the curvatures of a line can only be had from experience; and the principal object which is here proposed, is an investigation of the various formulas which are required in facilitating the operations in the field.

2. In order to obtain results which are of commodious application in the field, it is necessary to use only circular arcs for curves; but when the situation of the ground is such as to render a continuous arc of the same curvature inapplicable to the purposes required, a curvilinear line may nevertheless be traced in such a manner as to take any desired form, in order to pass through any number of designated points, by merely connecting together a succession of circular arcs, having different *radii of curvatures*. To make a good selection in the field, for those different circular arcs, requires skill and judgment; but the only additional care to be observed in the operations of tracing such a selected line, will arise from the necessity of connecting the different arcs in such a manner as that they may have a common normal at their point of connection.

The following well-known properties of the circle exhibit the first principles which will be necessary in the subsequent inquiries.

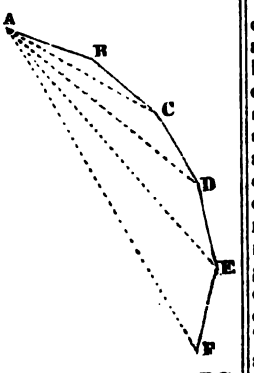
Theo. I. The angle of deflection* between two equal and contiguous chords is measured by the arc which is subtended by either of the chords. II. If there be a tangent line, and a chord from the touching point, the angle of deflection from the tangent line into the chord is one-half of the angle of deflection between two such equal chords. III. Tangent lines from the two extremities of any arc, form equal angles with the connecting chord: each equal to one-half of the intercepted arc. IV. Any angle at the circumference, standing upon a given chord, will have a constant value for all positions of that chord upon the circumference; and this constant value is one-half of the arc subtended by the given chord. These principles are presumed to be familiar to the reader; and have been here transcribed only for the sake of convenient reference.

* The angle of deflection between two lines which meet in a point, is the angle contained between either line and the other line produced.



Thus DBC is the angle of deflection between the two lines AB and BC.

3. Let any number of equal straight lines, AB, BC, CD, &c., be connected together in such a manner at their extremities, that the angles BAC, CAD, DAE, &c., may be all equal to each other; it then follows from Theo. IV., Art. 2, that the points A, B, C, D, &c., will all be situated in the circumference of a circle. And this obviously suggests the common methodof tracing a circular arc in the field, by means of a chain whose length is AB, or BC, or CD, &c., and an instrument for measuring the equal angles BAC, CAD, DAE, &c. It is thus easy to set as many stations in a curve as can be seen from an instrument placed at the station A. The *position* of the first chain, AB, is here taken arbitrarily, and does not effect the *curvature*.



4. In using the formulas which will be deduced in the course of the present inquiry, it must be remembered that all measurements of *distance* are supposed to be made in chains, and the decimal parts of a chain. The chain will therefore be the *unity* of length, and may have any value whatever; but as this will be a constant quantity in the field, it follows, that the *curvature* of a line, traced as in the last article, can only be made variable by assuming, in succession, a different value for those equal angles BAC, CAD, DAE, &c. These equal angles will therefore be called the *modulus* of curvature, and will always be denoted by a letter T. The modulus of curvature will therefore be a constant quantity in the same curve, but variable in different curves; and any curve will be given, when its modulus of curvature is known. The letter n will be taken to denote the number of chains composing any arc which may be under consideration, and the letter D to represent the number of degrees contained in that arc. It is then obvious, from Theo. IV., Art. 2, that each chain will subtend a portion of the circumference equal to 2T; and consequently the following formula is the evident result,

$$D = n \times 2T. \qquad (I.)$$

This expression gives the number of degrees which any arc contains, when the modulus of curvature and number of chains are known.

5. In tracing a circular arc of given curvature, by means of chords of more or less than one chain in length, the particular modulus of curvature corresponding to any given length of chord will be nearly proportional to the length of that chord, when that length is only a very small part of the whole circumference. For in this case the length of the given chord will be nearly proportional to the number of degrees in the arc which it subtends, and therefore, also, by Theo. IV., Art. 2, nearly proportional to its particular modulus of curvature.

Hence T denoting the modulus of curvature for a given curve with a chain whose length is unity, then $p \times T$ will be nearly the modulus of curvature for the *same curve* when traced by means of chords whose length is p chains. This result is only approximative; but a rigorous formula will be investigated hereafter. It is evident, upon the same principles, that (I.) is rigorous only when n is an *integer* number of chains.

6. Since each chain in a curve subtends a portion of the circumference equal to double the modulus of curvature, it follows, from Theo. I., Art. 2, that the angle of deflection between any two contiguous chains will likewise be equal to double the modulus of curvature. And it thus also obviously appears, from Theo. II., Art. 2, that the angle of deflection from any chain into a tangent line at either of its extremities, will be equal to the modulus of curvature.

7. When a given curve contains more than one chain of the same modulus of curvature, and the direction of a tangent line at any station be required, it should never be found from the direction of the first chain at that station; for small errors will arise, both in placing the instrument vertically over one of the stations, and in taking the back sight to the centre of the other, and the angular effect of these errors will obviously diminish as the two stations are more remote. In order, therefore, to obtain the direction of a tangent line at any station in a given curve, direct the instrument into a chord, embracing a number of chains in the proposed curve, denoted by n; and it then appears, from Theo. III., Art. 2, that $\frac{1}{2}D$ will express the angle of deflection from the selected chord into the required tangent line. Hence, by Art. 4, the formula required in obtaining the direction of a tangent line is,

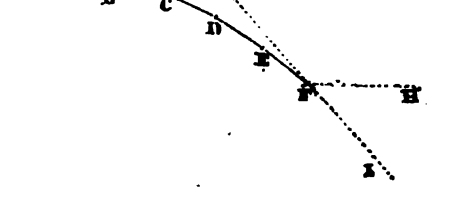
$$\tfrac{1}{2}D = n \times T. \qquad (II.)$$

8. The general method of tracing a curve in the field, having the modulus of curvature given, will appear from Art. 3; but it remains yet to show how such a curve may be laid to a given tangent line at a given point. It is obvious from Art. 6, that the required object will be attained by laying the first chain from the given point with an angle of deflection from the given tangent line, equal to the modulus of curvature of the proposed curve. For then the same curve may obviously be continued from that first chain to any number of chains, by the method of Art 3.

9. It is frequently necessary to pass from one given curve into another, having a different modulus of curvature. When this case occurs, the instrument must be placed at the station where the change of curvature is to be made; and let it be directed into the *tangent line of the first given curve* at that station, agreeably to the method in Art. 7. The instrument may then be considered as adjusted, so as to be in readiness, either to lay a *continuation* of the first given curve, or to lay any other curve, from another given modulus of curvature, in such a manner as to have a common tangent with the first curve at the *point* where the two curves pass into each other; and it is sufficiently obvious that, in either of these two cases, the selected curve must be traced agreeably to the principles given in Art. 8.

When, therefore, a change of curvature occurs at any station, the angle of deflection between the two chains at that station will be equal to the *sum of the two moduli of curvatures*.

10. Let AB, BC, CD, &c. represent the successive chains by which a given curve, ABCD, &c., may be traced from its origin at the station A, in such a manner as to touch a given right line, AX, at that point. It is proposed to investigate a formula which will express the inclination of the given tangent line, AX, to the nth chain in the given curve, estimating from the origin at the point A.



Take EF to represent the *n*th chain; and let the letter E denote the required inclination of the line EF to the given tangent line AX. The inclination of the first chain, AB, is expressed by the given modulus of curvature T, agreeably to Art. 6, or 8; and consequently, the inclination of the second chain, BC, will be expressed by T + 2T, or 3T. In like manner the inclination of the third chain, CD, is expressed by 3T + 2T, or 5T. Hence the inclinations of all the chains AB, BC, CD, &c. will obviously be expressed by T, 3T, 5T, &c. respectively. The problem is therefore evidently reduced to the following very simple inquiry, viz.: To find the value of the *n*th term of the series 1, 3, 5, 7, &c. But agreeably to the principles of arithmetic, this *n*th term will be expressed by $2n-1$. The desired formula will therefore be,

$$E = T \times \overline{2n-1}. \qquad (III.)$$

The expression (III.) will be frequently very convenient in the field when it is required to compute the magnetic bearing of any particular chain in a long curve, when the bearing of the given tangent line at the origin is known. If the country be free from metallic matter, and the instrument be in proper order for use, the magnetic bearing will always serve as a very useful check in detecting any material error which may have been inadvertently committed in the previous deflections. By way of a numerical illustration of this, let the given tangent line AX bear due North; and let the given modulus of curvature be 2°, to find the bearing of the 20th chain. Here $T = 2°$, $n = 20$; and therefore $E = 2° \times \overline{40-1} = 78°$; and if the curve be supposed to bend to the left, then the bearing of the 20th chain is N. 78° W. If the observed course do not correspond with this result, some error has been committed in tracing the curve. This method of proof is so very simple, that it should be attended to frequently in tracing long curves, in order to avoid useless labor after some error may have been already committed. The magnetic bearing of a particular chain in a curve is also sometimes required in the field for other purposes.

11. Let ABCD, &c., represent a given curve traced as in the last article; and take EF to represent the *n*th chain estimated from the origin at the point A. It is proposed to find a method of directing the instrument, when placed at the station F, into a position parallel to the given tangent line AX at the origin of the curve.

Direct the instrument into a chord, through any of the back stations, as for instance the station C or D, (see fig. Art. 10,); and, from that chord, deflect into the tangent FI, at the station F, agreeably to the method given in Art. 7. Take D′ to denote the inclination of the tangent FI, to the given tangent AX at the origin of the curve, and it evidently follows, from Art. 6, that, $D' = E + T$; or, substituting for E its value from (III.), the following expression is at once obtained,

$$D' = 2nT \ . \qquad (IV.)$$

Hence, from the tangent FI, deflect an angle IFH equal to 2*n*T; and the instrument will then have the required position FH.

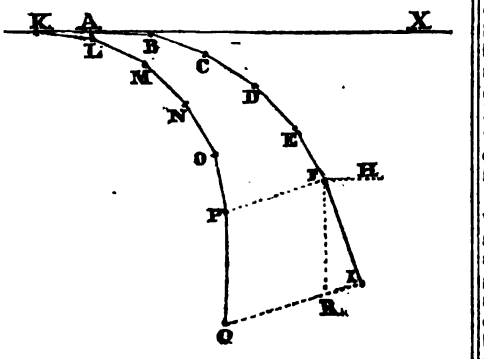
The principle which has just been explained will very frequently be highly useful in the field. For if the origin of the given curve ABCD, &c. be removed from the point A, to any other point in the tangent line AX, then the station F will be changed exactly by the same quantity, and in the same direction, upon the line F H, as will be hereafter shown.

12. Let any two curves be laid upon the same tangent line, and take T and T′ to represent the two moduli of curvatures, and let each curve pass into a tangent at the extremities of the *n*th and *m*th chain respectively. It is then proposed to determine a formula which will express the inclination of those latter tangents to each other.

Take *z* to denote the inclination required. From (IV.) it appears, that 2*n*T, and 2*m*T′, respectively, will express the inclination of each of the proposed tangents to the common tangent at the origins of the two curves; and hence the difference between the quantities 2*n*T and 2*m*T′ will obviously express the value of *z*. The formula required is therefore the following,

$$z = 2nT - 2mT'. \qquad (V.)$$

The expression (V.) will find an application in the field in all cases where two tangents are under consideration; for in computing the rate at which any two tangents converge or diverge, their inclination to each other is, of course, the first datum required. The principles contained in (V.) and its application to different cases occurring in the field, will be more easily explained by a reference to a figure. Let A B



C D, &c., represent the curve whose modulus of curvature is denoted by T, and let EF represent the *n*th chain, and FI the tangent at F. In like manner let KLMN, &c., represent the curve whose modulus of curvature is denoted by T′, and let OP represent the *m*th chain, and PQ the tangent at P.

Draw FH parallel to KX, the common tangent at the origins of both curves; and draw, also, FR parallel to the tangent PQ. The inclination of the tangent FI, to the common tangent KX, will evidently be expressed by the angle HFI, or 2*n*T; and the inclination of the tangent PQ, to the same common tangent, will in like manner be expressed by the angle HF R, or 2*m*T′. Hence the angle IFR, which measures the inclination of the two tangents, FI and PQ, *to each other*, will be expressed by the quantity 2*m*T′—2*n*T. When, therefore, the value of *z* in (V.) comes out *negative*, it shows that the line FR falls below the tangent FI; that is, *the two tangents in that case diverge*. When *z* comes out positive, the line FR will be situated above the tangent FI; that is, in such a case the two tangents PQ and FI *will converge*. It is here supposed, however, that the two curves do not intersect each other.

It is sufficiently obvious that the angle 2*n*T will remain the same, whatever position may be given to the origin A in the tangent line AX; and it hence evidently follows, that the distance AK, between the two origins, has no connection whatever with the inclination of the two tangents, FI and PQ, to each other. The distance AK will, however, have an effect upon the line PF, which expresses the distance between the extremities of the two curves. Supposing the distance AK, and the moduli of curvatures, with the number of chains, *n* and *m*, contained in each curve, to be all given, the line PF may be computed by methods which will be hereafter explained; and then the angle IFR, which measures the inclination of the two tangents, FI and PQ, to each other, being known from (V.) it will be easy to compute the situations of any proposed points, in those two tangents, which may come under consideration in the field, by the common methods of plane trigonometry.

When the distance PF is very small in comparison with the length of the tangents FI or PQ, and when these tangents are but little inclined to each other, every necessary calculation in the field may be made by means of very simple approximative methods. All this will be fully explained in the subsequent articles.

[*To be continued.*]

UTICA, 26th AUGUST—*Mechanics Convention.*—The Mechanics State Convention convened at the Court House in this city on Wednesday morning last, and organized by appointing RUDOLPH SNYDER, Esq. of Utica, President; *Anson Baker*, of New York, and *Frederick Starr*, of Rochester, Vice Presidents, and *Robert Taylor*, of New York, and *R. Hogarth*, of Monroe, Secretaries. The Convention continued in session until 4 o'clock on Thursday afternoon. The proceedings were characterized by great unanimity and harmony of feeling, and were unusually interesting. Several very able addresses were delivered, which must have satisfied all who heard them, that talents are not *confined* to the learned professions. The details and facts laid before the Convention as to the ruinous effects produced on many branches of the mechanics by the State Prison monopoly, and the distress and ruin brought upon those who have heretofore supported themselves respectably and comfortably by those occupations which now come in competition with State Prison labor, were truly appalling. Some facts were disclosed also, with regard to the letting of the contracts, which went to show that corruption and favoritism are not entirely banished from our land.

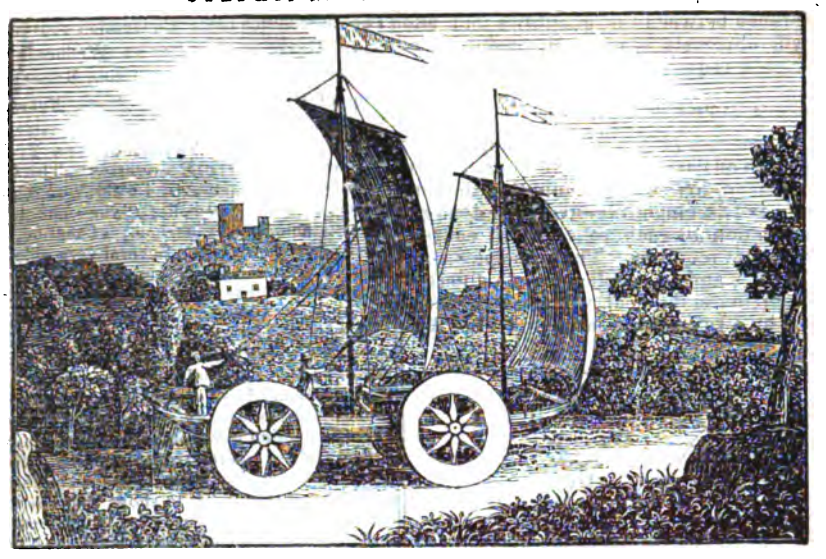
The Address and Resolutions adopted by the Convention, were ably drawn up, and set forth their grievances, and their determination that those grievances shall be redressed, in firm but temperate language, evidently showing that the feeling which is now aroused will not be suffered to languish until the object for which they assembled is attained. We believe that this is the commencement of a new era with the mechanics of our State, and that they are destined speedily to take a much more elevated rank in the community than they have hitherto occupied. —[Oneida Whig.]

Crops in Georgia.—A letter from Macon, dated Aug. 15, says:—

"I have just returned from a tour through most of the counties lying between the Ockmulgee and Chattahoochie rivers. The crops of corn and cotton I found at least equal to what I had ever before seen them, at this season of the year. The corn crop is made, and is acknowledged by all to be the most abundant one that there has been for many years.—The cotton crop is now so far advanced, that some extraordinary occurrence must take place to prevent a large product being realized, and should we have an ordinary season from this time out, the greatest product per acre will be realized, that there has been within my recollection. The plant is large, and *unusually well bolled*. The high prices induced the planters to extend the cultivation to the extent of their ability; and should the crop mature, as it now promises, the exports for this coming season, will not be less than 90 to 100,000 bags, against 70,000 the present season; and from Columbus, 25 to 30,000, against 17,000. In the course of my route, I met with many persons from various parts of the up country, who gave similar accounts of the crops. Whilst in Columbus, I met with many intelligent travellers from the Western States, who represented the crops in those States as being more promising, if possible than they are in this. The planting interest in the interior of Georgia, is in a more prosperous condition than I have ever before known it, and there is very little pecuniary embarrassment among the people generally."

Singular Conflict.—One day last week a striped snake two feet long, seized a young bullfrog in a marsh back of our office, and began to swallow him whole; while in the full tide of successful experiment, a monster of a bullfrog crept from the marsh, seized the snake, and began to swallow him. He made such fearful progress, that soon the snake was obliged to release his prey and defend himself. In spite of his struggles and contortions, the frog had swallowed all but about an inch of the tail, when some boys began to beat and abuse the old frog.—During this onset the snake managed to wheel about, and soon run his head out of the frog's mouth and branished his forked tongue with much fury. The boys continued to work with the frog until finally the snake crept out and moved off slowly, evidently much injured by the operation. We have been greatly provoked in our boyish days to see bullfrogs swallow our young ducks and chickens, but we never before saw the frog carry the war so far into the enemy's country as to attack its natural enemy, the snake.—Whether this is an uncommon occurence or not, we are unable to say, but it is certainly the first time we ever saw any thing of the kind.—[Westfield Journal.]

STEPHINUS' SAILING CHARIOT.



The Sailing Chariot.—It would be almost as difficult to assign limits to human ingenuity and invention, as to human ambition. That there are limits which the one cannot pass, while the other is boundless as the imagination itself, will not be denied; but the scientific discoveries of the last half century must make us hesitate before we say such or such a thing is impossible. In mechanics, in chemistry, and in the ingenious branches of the fine arts, improvements and discoveries have succeeded each other with a rapidity which outstretched all anticipation, and have set all calculations at defiance. No man will now dare say to any of these branches of science, "hitherto shalt thou go and no farther."

To be enabled to make the wind, which "bloweth where it listeth," subservient to the purpose of propelling huge vessels on the ocean, and thus to form an intercourse with the most distant parts of the world, was a great triumph of science; but to be able to steer a vessel with a rapidity that the wind does not generally afford, in a dead calm, or independent, or even against the wind, by steam, is a discovery which would not have been credited a century ago; and other discoveries which were once thought equally improbable have since been made.

The wind, which has been of such good service on the ocean, has for ages been used in machinery on shore, such as the working of mills, &c. Some individuals have, however, thought it might be used to propel vehicles on land. In the last century, Stephinus, of Scheveling, in Holland, constructed a chariot on wheels, to be impelled by the wind, the velocity of which was so great that it would carry eight or ten persons from Scheveling to Putten, a distance of forty-two English miles, in two hours.

Carriages of this kind are said to be frequent in China; and in any wide level country must be sometimes both pleasant and profitable. The great inconvenience attending the machine is, that it can only go in the direction the wind blows, and even not then, unless it blows strong; so that after you have got some way on your journey, if the wind should fail or change, you must either proceed on foot or stand still.

The Hollanders have small vessels, somewhat of this description, which carry one or two persons on the ice, having a sledge at bottom instead of wheels; and being made in the form of a boat, if the ice break the passengers are secured from drowning.

Our engraving presents a perspective view of Stephinus' Sailing Chariot. The body of it is in the form of a boat; the axletrees are longer, and the wheels further asunder, than in ordinary carriages, in order to prevent its being overturned. The body is driven before the wind by the sails, guided by a rudder.—[London Mirror.]

Stoves.—Our readers may perhaps be a little surprized at our taste in calling their attention to the subject of stoves in the month of August. But no other apology is necessary than simply assuring them that a discovery has been made, somewhat recently, of a method of warming apartments by an uncommonly economical contrivance, which must recommend itself to every candid observer. Autumn will make its advances by and by, and when Boreas begins his howlings round the best constructed dwelling, there is peculiar satisfaction in knowing that the approaches of cold weather can be met at the threshold with impunity.

But to the point: Thomas G. Fessenden, Esq. extensively known as an author, and particularly by his efforts in scientific agriculture, as editor of the New-England Farmer, has constructed a stove, which is truly a fuel-saving invention. That it may be talked about and tried, we have ventured thus seasonably to recommend it to patronage abroad. The principle on which its excellence depends is so simple, that on that account alone it presents a stronger claim to patronage. Fessenden's stoves are always convenient, on account of the volume of hot water which they contain.

They are also comforts, because they radiate heat with a comparatively small quantity of fuel. And they are wholesome too, because an evaporation is continually going on from the surface of the water concealed within an urn. Finally, the room is warmed by hot water, and not by the fire that heats the water.

Had Mr. Fessenden furnished himself with an engraving of his *Economist*, a name we have christened it by, we should have made the attempt to borrow it for this page; but we shall, nevertheless, recommend the stove for school rooms, libraries, and halls, in which large assemblies meet, as being altogether superior to the thousand-and-one inventions already stowed away in the patent office. Menageries too, as already remarked in the first volume of the Tracts, would save their animals from premature death by the gentle warmth given out by this comfort-taking contrivance.

Perhaps all this recommendatory notice may fail of its object, and no one beyond the Allegany mountains may be induced to order Mr. Fessenden's stove from Boston; still, however, we have done all we are able to do to extend the reputation and high claims of the Economist, which is completely philosophical in all its parts. Mr. Fessenden is a gentleman of science, and that fact is itself sufficient to elicit the attention of well informed men.—[Scientific Tracts.]

Self-taught Mechanist.—A boy, of the name of John Young, now (1829) residing at Newton-upon-Ayre, in Scotland, constructed a singular piece of mechanism, which attracted much notice among the ingenious and scientific. A box about three feet long by two broad, and six or eight inches deep, had a frame and paper covering erected on it in the form of a house. On the upper part of the box are a number of wooden figures, about two or three inches high, representing people employed in those trades or sciences with which the boy is familiar. The whole are put in motion at the same time by machinery within the box, acted upon by a handle, like that of a hand organ. A weaver upon his loom with a fly-shuttle, uses his hands and feet, and keeps his eye upon the shuttle as it passes across the web. A soldier, sitting with a sailor at a public house table, fills a glass, drinks it off, then knocks upon the table, upon which an old woman opens a door, makes her appearance, and they retire. Two shoemakers upon their stools are seen, the one beating leather, the other stitching a shoe. A cloth-dresser, a stone-cutter, a cooper, a tailor, a woman churning, and one teazling wool, are all at work. There is also a carpenter sawing a piece of wood, and two blacksmiths beating a piece of iron, the one using a sledge, and the other a small hammer; a boy turning a grindstone, while a man grinds an instrument upon it; and a barber shaving a man whom he holds fast by the nose with one hand.

The boy was only about seventeen years of age when he completed his curious work, and since the bent of his mind could be first marked, his only amusement was that of working with a knife and making little mechanical figures; this is the more extraordinary, as he has no opportunity whatever of seeing any person employed in a similar way. He was bred a weaver, with his father; and since he could be employed at the trade, has had no time for his favorite study, except after the work ceased, or during the intervals; and the only tool he has had to assist him was a pocket knife. In his earliest years he produced several curiosities on a similar scale, but the one now described is his greatest work, to which he devoted all his spare time during two years.

Sand of Pekin.—All travellers, says St. Pierre, who had been in Pekin, are agreed that it is not possible to go abroad, during a part of the year, into the streets of the city, without having the face covered with a

veil, on account of the sand with which the air is loaded.

PHILOSOPHICAL FACTS.—Sound travels 1132 feet in one second, or 13 miles in a minute. The softest whisper flies as fast as the loudest thunder; and no sound produced by artificial means can be heard over 200 miles. In the war between England and Holland, in 1672, the guns were heard in those parts of Wales judged to be nearly 200 miles distant from the scene of action; but sounds arising from volcanoes have been heard at a much greater distance.

Light goes about 13,000,000 of miles in one minute. A strong wind flies 20 feet in a second. If the distance between us and a cannon when fired be one mile, we hear the report 24 seconds after we see the flash. The nearest of the fixed stars is 5000 times more distant from us than the sun: its distance, then, must be 77,400,000,000 miles. Were a cannon fired from a star, it would require 5,400,000 years for the report to reach us. The hardest metals on which common fires, and even glass-house furnaces, could produce no effect, have been melted in a few seconds by means of *lenses* or *mirrors* called *burning glasses*. M. Villet, a native of France, about 100 years since constructed a *mirror* 3 feet 11 inches in diameter, and 3 feet 2 inches focal distance, which was so powerful that it melted *copper ore* in 8 seconds, *iron ore* in 24 seconds, a fish's tooth in 32 seconds, cast iron in 16 seconds, a silver sixpence in 7 seconds, and tin in 3 seconds. M. Villet's mirror condensed the rays of the sun 17,257 times, a degree of heat which is about 190 times greater than common fire.

Mr. Parker, of London, constructed a lens 3 feet in diameter, focus 6 feet 8 inches, weighing 212 pounds. It melted 20 grains of *gold* in 4 seconds, and 10 grains of *platina* in 3 seconds. The broader the lens and shorter the focal distance, the more intense is the heat produced by such instruments. A globular decanter of water is a powerful burning glass, and furniture of houses has taken fire by incautiously leaving it exposed to the sun's rays.—[Lynceus.]

PLANARIÆ.—On January the 27th, at the Royal Institution, Mr. Faraday proceeded to lay before the literati assembled, an account of Dr. R. Johnson's investigations into the *restorative, productive*, and *reproductive* powers of the Planariæ, a genus of small animals allied to the leech, and of which there are several known species, viz., P. torva, lactea, hastata, arethusa, felina, &c., the three first of which are to be found abundantly in a pond near the Red-House, Battersea Fields.

From Dr. Johnson's experiments, it appears that if an incision be made longitudinally into the head of the animal, so as to separate its eyes from each other, if the cut has not been carried very far down, it will heal in the ordinary manner; but if the head be absolutely cleft in twain, then, according to the extent of the fissure, there will be a mass of new matter formed by each half of the head, which will either join the two halves together, forming a head of extraordinary size, and bearing in it one or two additional eyes, or each old half, thus cleft, will form the new matter into another half, with an eye, and so the animal have two complete and entire heads. If the fissure be farther down through the body of the animal, then not only will there be two heads, but two bodies also formed, joined together only by the tail; and when this is the case, so little unanimity does there exist between these *siamoid* twin-planariæ, that they never pull or swim the same way; and so violent are their efforts, that they frequently, in the course of two or three days, tear the only remaining bond of union, their tail, in sunder, and then two distinct and perfect animals result.

If in a common planaria the head be cut entirely off, a new head will be formed; and if its lower extremity be removed, it will produce a new tail. In a planaria, which, by the operation above described, had been invested with two heads, these "nova capita" were successively severed for three several generations, and were immediately and perfectly renewed, and subsequently the animal was cut through just below the artificial bifurcation, and then only a single head was produced, so that in this most simple "capital" operation, a single headed animal became a biceps, and, after having had the use of six heads in succession, was subsequently reduced to the possession of a single one.

When one of these animals is cut in half, the head, or anterior extremity, swims away as if nothing had happened, and speedily retails itself; but the tail swims to the bottom, and remains torpid for two or three days, by which time it has formed for itself a head. If a planaria be cut into three pieces, the head will form a new body and tail, the tail a new body and head, and the middle section or body will produce both head and tail. If a quarter be removed by making a longitudinal incision through the head, and half down the body, and then a semi-transverse cut to remove the upper quarter, not only will the three remaining quarters speedily re-produce a new fourth, but also the separated fourth will form to itself three new quarters. Indeed, a planaria has been cut into as many as ten pieces, and each piece has become an entire and perfect animal. In fact, this mode of propagation, which physiologists artificially institute, seems to be frequently resorted to by the animal itself. The planaria felina has been seen to throw off pieces of its body, to form new animals, and these are not diseased but healthy parts, and not only parts of its tail, but often offsets from its sides, &c. Indeed, the planaria felina, and p. arethusa, have been never known to lay eggs, whilst the torva, lactea, &c. lay them in abundance, both the original animals and those artificially produced. It would seem that those species which inhabit springs and running waters, propagate only by division; but those which dwell in ponds and ditches, where the water is occasionally exhausted, are oviparous, as well as viviparous.

The above facts are physiologically curious, as they show a still closer affinity than had been previously supposed to exist between the propagation of plants and animals by cuttings as well as seeds; for they have shown that this mode of propagation can be carried to an almost equal extent in the one as in the other—an extent to which the experiments of Trembley, and others, on polypi, star fish, &c., did not reach.—[Medical and Surgical Journal.]

SUGAR AN ANTIDOTE TO THE POISON OF OR FROM COPPER.—So many accidents occur from using copper vessels, that we deem it proper to give the most simple directions for counteracting the poisonous effects of the oxide of this metal. Sugar is a most powerful antidote against verdigris and other preparations of copper, although it is difficult to understand in what manner the beneficial process is conducted. M. Duval introduced, by means of an India rubber tube, four drachms of oxide of copper dissolved in acetic acid into the stomach of a dog; in about four minutes afterwards he injected by the same medium four ounces of strong syrup; this dose he repeated at intervals of half an hour, until he had injected twelve ounces. During this time the animal experienced much nervous excitement, and was slightly convulsed; but after the last injection he became perfectly calm, and having gone to sleep, woke without feeling any farther effects of the poison. M. Orfila relates several instances of persons who had taken acetate of copper, either accidentally or designedly, having been recovered by the administration of sugar. He several times proved by experiment that a dose of verdigris, which would otherwise have killed a dog in an hour or two, might be swallowed with impunity if previously mixed with a quantity of sugar. As alcohols have a property which neutralize the most concentrated muriatic acid in ethers, it would appear sugar neutralizes the oxides of copper and lead. Subtartarate of neuter lead was, indeed, used by Berzelius in his experiments to determine the proportional parts of sugar. If an ounce of white sugar be boiled for half an hour in a phial, with an ounce of water and ten grains of verdigris, a green liquid will be procured, in which the most sensible re-agents will not indicate the presence of copper, such as hydroferrocyanate of potass, ammonia, and hydrosulphuro; but an insoluble carbonate of copper will remain at the bottom of the vessel.—[Journal des Connaissances Usuelles.]

AGRICULTURE, &c.

[*From the New York Farmer.*]

NORFOLK HOGS.—From two letters of Mr. W. K. Townsend, of New-Haven, to the editor of the Baltimore Farmer, we extract the following.

Dear Sir:—Your much esteemed favor of the 24th ult. came to hand some days since, and should have received an earlier answer. I have a breed of swine, (Norfolk Thin Rind breed,) which are in these parts considered rather before any other breed we have. They were imported something over four years since, by Henry Degroot, Esq. of New-York. He was in England, and heard of this breed of hogs as being of much note in that country. He purchased three pigs, and on his return took them to his farm in New-Jersey, where he had a superior stock of blood horses and short horned cattle. Immediately after his return, he concluded to go to England, and spend some years in the city of London, and offered me his stock. I purchased two cows, one bull, and two pigs, (one boar and a sow)—the other, a sow, he placed on his father's farm. I have since understood that it has changed the breed for the better, in all that neighborhood. Persons in this part of the country have given them a thorough trial with other breeds; and they, with the same feed, have done better than any other. I usually keep, say five or six breeding sows; and my pigs are usually all engaged before they come. I generally choose a few of the best, and sell them for breeding, at different prices, at different ages: when well weaned from the sow, five or six dollars each; and as they advance in age, so I advance in price.

The black and white is quite liked in this section of the country; some prefer white. I did not know which (if either) you would prefer, so I send you a part of each. My old imported sow was white; the boar black and white, marked almost like them sent to you. This breed of hogs is not particular as to feed; my sows run in pasture, and get most of their living on grass, until nearly time to pig. While they nurse, I feed them on meal, beans, rye, boiled potatoes, and some corn. I am told almost daily, by persons who have pigs from me, or of others that have got into the breed, that their pigs do much better on the same feed than any other they have had.

FOREIGN INTELLIGENCE.

By the packet ship George Washington, Captain Holdrege, from Liverpool, we have received our London papers to the 23d, and Liverpool dates to the 24th. There is nothing of much political interest.

From the Parliamentary Report, we learn that the Irish Coercion Bill was considered in Committee, and after some amendments had been proposed and negatived, the Chairman reported progress, and obtained leave to sit again.

The Prisoners' Counsel Bill was read a third time and passed.

Mr. Alley, the barrister, died at his house in Albany-terrace, Regent's Park. The immediate cause of his death was scarlet fever, but he had lately become much attenuated in consequence of the mistake he made some time ago in taking poison. Mr. Alley was of very long standing at the bar, and was much respected by all who knew him.

The Poor Laws amendment bill was introduced into the House of Lords by the Lord Chancellor, (Brougham.) It was opposed by the Tories, and is very unpopular.

In France, Marshal Soult has resigned the presidency of the Council of Ministers and the War Ministry. Marshal Gerard is appoined his successor in both offices.

Don Carlos.—There is a letter in town, dated from Elisondo, in the handwriting of Don Carlos, which mentions the happy issue of his journey, speaks of the enthusiasm of his adherents, and says that a supply of arms and money only are wanting to secure the speedy success of his claims to the Spanish throne. The cause of the legitimate monarch of Spain will not fail, we feel confident, for the want of such supplies.—[Morning Post.]

Orders have been issued for the immediate sailing of the steam frigates Salamander and Medea, from the river to Portsmouth. Their supposed destination is Spain.

It is confidently stated that a French army will march into Spain, and an English fleet will co-operate, in aid of the Queen Regent.

THE NEW BRITISH MINISTRY.—The London Spectator thus divides and describes the New Cabinet:

The following may be reckoned Liberals—

Lord Althorp,	Mr. Ellice,
Mr. Spring Rice,	Lord Duncannon,
M. Abercromby,	Sir John Hobhouse;
Mr. Charles Grant,	

And surely we may add Lord John Russell.

Then follow the Whigs—

Lord Melbourne,	Lord Lansdowne,
Lord Carlisle,	Lord Auckland.
Lord Holland,	

Two still remain, who may fairly be presumed to go along with the majority, of whatever complexion the policy of that majority may happen to be. They are—

Lord Brougham, Lord Palmerston.

Of fifteen members, then, eight may be reckoned as Liberals. But we are unwilling to class Lords Melbourne and Holland, and even Lord Auckland, among the Obstructives. Perhaps it will appear that they have sided with Earl Grey more from personal feeling than a sincere approbation of his recent policy. As for Lord Carlisle, we presume that he is a Whig; but he never opens his mouth in Parliament, and his official acts are utterly unknown to the public, who pay for the honor of his countenance in the Cabinet. The Marquis of Lansdowne leans staunch to Toryism; and Lords Brougham and Palmerston are statesmen who will never, if they can help it, abandon their Sovereign's service. The result, however, is, that at the worst, the Liberals, if they are true to themselves, can outvote their opponents united; and the fact of theirs being the popular party, will always give them vast additional influence. It is plain, therefore, that Liberalism has been advanced by the late changes. The additions to the Cabinet are likewise worthy of praise. Every one speaks well of Lord Duncannon. He is beloved in Ireland, and esteemed everywhere, as an upright, amiable, and clearheaded, though by no means brilliant, person. Mr. O'Connell, and the Irish members generally, are pleased with this appointment. Sir John Hobhouse is well known as clever, accomplished, and industrious. His powers of speech will be of service in debate; and will be much needed, for the crack orators are all on the Opposition benches. Sir John has now an opportunity of recovering the false step which ruined him in Westminster: it remains to be seen whether he will make a good use of it.

The aspect of affairs has, we are inclined to hope, been considerably improved. The Cabinet contains, it is true, no person of first rate abilities, except the Lord Chancellor, who cannot be relied upon.—But, on this account, they must be the more painstaking, and adhere the firmer to sound principles: the public cannot be dazzled by the brilliancy of their talents, and must be conciliated and won over to their support by the excellence of their measures.

TRADE WITH SPAIN AND THE SPANISH COLONIES.—It will be remembered that at the late session of Congress an act was passed to countervail the heavier duty to which in Cuba, and we presume other Spanish possessions, produce in American bottoms is subject, as compared with the same produce in Spanish bottoms. This appears to have been a measure provident of the future, as well as applicable to the then existing state of the trade, for, according to the information contained in the annexed extract of a letter from Madrid, under date of 9th July, to the London Times, the discrimination between produce carried in Spanish or foreign vessels, is to be still further increased. We give the extract:

The first commercial measure of the new Minister of Finance has no tendency to strengthen or confirm the opinions entertained in foreign countries of the liberality of his administration. In spite of the more extended views of his Under Secretary of State, the late Intendant of the Havana, he has yielded to the clamor of the corn-growers of Castile, and has considerably altered the amount of difference in discriminating duties on the importation of flour into Cuba, to the prejudice of the colonists as well as the United States of America.

According to the new tariff, Spanish flour, in Spanish bottoms, is to pay $2 per barrel; Spanish flour, in foreign bottoms, $6 per barrel; foreign flour, in Spanish bottoms, $8 1-2 per barrel; and foreign flour in foreign bottoms, $9 1-2 per barrel, with the addition in the three last cases of the *derecho de balanza*. This arrangement, if it does not produce a revolution in the island of Cuba, will only owe its harmlessness to the impossibility of carrying it into execution, for there can be no doubt that in the face of so enormous a difference, the contraband trade from the North American Continent must become still more flourishing than it is at present, even if the Government of Washington did not succeed by retaliatory measures in bringing the Madrid Cabinet to reason.

FOREIGN ITEMS—*Regal Rites.*—From the Bengal papers we learn that the King of Ava, his Queen, and Court, and indeed the country generally, were engaged in a grand public entertainment, which was to *last forty-nine days*, on the occasion of the daughter of the royal pair having her ears bored!

Madame Malibran has recently entered into an engagement with the Milan opera for five years.—According to its tenor, she receives a house, a table with six covers, an equipage, and fourteen thousand pounds.

Under the empire (says The Cosaire) we built barracks; under the restoration churches; under the royalty of the people prisons. At this moment three are in course of erection at Paris.

The Emperor of Russia has granted a pension of 3000 florins to the celebrated Polish actress Madame Josephine Ledochowska.

The London Gazette of the 1st inst. contains a notification from the Lord Chamberlain, that each person upon being presented to the King, is to kneel upon the right knee, and kiss his Majesty's hand, then bow and retire. This, however, only extends to British subjects: foreigners are exempt from such *favors*.

The grand festival at Westminster Abbey concluded on Tuesday week, when their Majesties attended as before, in state. The performance was the Messiah, and passed off well. It is said the receipts will amount to £20,000.

The proceeds, after deducting some 7 or 8000l. for expenses, were to be divided among various charities connected with musical societies. No part, it is added, by way of a slap at the motives of an amateur nobleman and performer, who was conspicuous in getting up the festival, will "drop into the pocket of Lord Burghesh."

The number of persons who have sailed from the port of Liverpool as emigrants to the United States and the British colonies, during the quarter ending the 30th of June last, is 11,625.

A Rich Cargo.—The ship Sarah, the first free trader from China, arrived at London in July with a cargo of raw silk valued at £400,000, or $1,800,000.

Paris improvement.—According to the plans agreed upon for improving the city of Paris, houses covering 159,814 square toises of ground are to be pulled down. The average price paid for the ground during the last ten years has been 2,300f. a toise, and as the annual expenditure for this purpose is only 1,200,000f., it will take at this rate three hundred years to complete the undertaking.

Strange Sale.—The following advertisement is seriously said to be from a Newfoundland paper:—"Auction—To-morrow, at 12 o'clock in the forenoon, if not previously redeemed, at the house now occupied by Mrs. Traverse, the under-mentioned articles, taken by distress for rent, due from the Legislative Assembly of Newfoundland to the subscriber, viz.:—One large desk, containing eight drawers, filled with a variety of books and papers of every description; one small ditto, used exclusively by the Speaker, and filled also with books and papers, and a portfolio of great value; the Speaker's chair, stuffed and elegantly covered with blue moreen, and mounted with brass; one large chair, stuffed and superbly covered, and well and substantially built, used by the Usher of the Black Rod! A cocked hat, of superior quality, but now a little shabby, worn by the Serjeant-at Arms!! The Reporter's desk; two large stoves with funnelling, and six covered forms; with a variety of other articles, too tedious to mention—all very valuable. Terms made known on the day of sale.—Mary Traverse."

New Comet.—On the 8th of April, it is stated, Professor Gambart, at Marseilles, discovered a new comet, of a pale light color, with a diameter of four or five minutes. Owing to the state of the atmosphere, and its disappearance on the 13th, little has been ascertained of the stranger, except that on the 10th, 16h. 33m. 45s. sidereal time, its right ascension was 20° 9′ 7″, and the south declination 22° 33′.

Purification of Smoke.—Several German publications contain allusions to a discovery of a new and certain method of remedying all the evils and inconveniences occasioned by smoke in great towns, made by a Saxon architect named Bernhardt. Though the means by which this important object is accomplished are not explained, the investigation the subject has undergone, and the evidence afforded by public authorities and private individuals in Prussia, where the discovery has been practically applied, seem to leave no doubt as to the successful result of the experiments. In the *Polytechnisches Journal*, published at Stutgard, there is a report on the discovery drawn up by Herr Schaffer, Professor of Architecture at Dusseldorf, where the first experiments were made. It seems that the heads of the Prussian Post-office have established an extensive manufactory for mail-carts and carriages at Dusseldorf. The smoke of this manufactory greatly annoyed the inhabitants of the neighboring houses, and the soot which fell destroyed their garden grounds. The Government spared no pains or expense to correct the evil. The Prussian Consuls were directed to inquire into the methods practised in England in such cases, but the remedies resorted to in this country were tried in vain. Actions were brought against the Post-office Department, and Government was on the point of removing the manufactory, when Baron Von Nagler, the Prussian Postmaster General, applied to Herr Branhardt, who, by a chemical process, separates the soot from the smoke, directs the ascent of the latter in a perfectly purified state, and makes the former descend in a manner which keeps the chimnies clean, and is a security against their taking fire. His labors were immediately successful. There are testimonials of equal success having attended his labors in the palace at Berlin and in different public offices; but what is not a little remarkable is, that the discoverer should be able to keep his method a secret, notwithstanding so many instances of its application, and the very obvious nature of the effect produced.

MEMOIRS OF M. DE CHATEAUBRIAND.—In publishing some days ago the testamentary Preface to these memoirs, we mentioned that they were not to see the light till after the author's death.

This was the express resolution announced in that preface; but either the vanity of the author is impatient, or the solicitation of friends is irresistible; for some fragments of these *Memoirs* have appeared in the *Revue de Paris*. Of one of these we borrow a translation from Blackwood's Magazine.

[*From the Memoirs of M. de Chateaubriand.*]

"Europe is hastening to a democracy. France is nothing else than a republic clogged by a director. Nations have grown out of their pagehood. Arrived at their majority, they pretend to have no longer need of tutors. From the time of David to our own times, kings have been called—nations appear now to be called in their turn. The brief and unimportant exceptions of the Grecian, Carthaginian, and Roman republics, do not alter the general political fact of antiquity, that the state of society was monarchical all over the globe. But now society is quitting monarchy, at least monarchy, such as it has been understood till now.

"The symptome of social transformation abound. It is in vain that efforts are made to recognize a party for the absolute government of a single man—the elementary principles of this government no longer exist—men are changed as much as principles. Although facts seem to be sometimes in collision, they concur nevertheless in the same result; as in a machine, wheels which turn in opposite directions produce a common action."

"But sovereigns, submitting themselves gradually to the necessary popular liberties—detaching themselves without violence and without shock from their pedestals, may yet transmit to their sons, for a period more or less extended, their hereditary sceptres, reduced to proportions measured by the law. France would have done better for her happiness and independence had she preserved a child who could not have turned the days of July into a shameful deception; but no one comprehended the event.—Kings are bent obstinately on guarding that which they cannot retain. Instead of descending gently on an inclined plane, they expose themselves to fall into a gulf—instead of dying gloriously, full of honors and days, monarchy runs the risk of being flayed alive—a tragic mausoleum at Venice contains only the skin of an illustrious general."

"Even countries the least prepared for liberal institutions, such as Spain and Portugal, are urged forward by constitutional movements. In these countries, ideas have outgrown the men whom they influence. France and England, like two enormous battering-arms, strike with redoubled strokes on the crumbling ramparts of the ancient society. The boldest doctrines on property, equality, and liberty, are proclaimed from morning to evening in the face of monarchs trembling behind a triple hedge of suspected soldiers. The deluge of democracy is gaining on them. They mount from floor to floor from the ground floor to the top of their palaces, whence they will throw themselves struggling into the waves which will overwhelm them."

"The discovery of printing has changed all social conditions—the press, a machine which can no longer be broken, will continue to destroy the old world till it has formed a new one. Its voice is calculated for the general forum of all people. The press is nothing else than the word, the first of all powers—the word created the universe. Unhappily the word in man participates of the human infirmity—it will mix evil with good, till our fallen nature has recovered its original purity."

"Thus the transformation brought about by the age of the world will have place. All is calculated in this plan. Nothing is possible now except the natural death of society, from whence will spring the regeneration. It is impiety to struggle against the angel of God, to believe that we can arrest Providence. Perceived from this height, the French revolution is only a point of the general revolution—all impatience should cease—all the axioms of ancient politics become inapplicable.

"Louis Philippe has ripened the democratic fruit half a century. The Bourgeois soil in which Philippism has been planted, being less worked than the military and popular soil, furnishes still some juices to the vegetation of the government of the 7th August; but it will be soon exhausted.

"There are some religious men who are revolted at the bare idea of the actual state of things having any duration. 'There are,' say they, 'inevitable reactions, moral reactions, instructive, magisterial, avenging. If the monarch who first gave us liberty paid for the despotism of Louis XIV, and the corruption of Louis XV, can it be believed that the debt contracted by *Egalité* at the scaffold of the innocent King is not to be acquitted? *Egalité*, by losing his life, expiated nothing. The tear shed at the last moment redeems no one—the tears of fear, which moisten merely the bosom, fall not upon the conscience. *What! shall the race of Orleans reign by right of the vices and crimes of their ancestors? Where, then, is Providence? Never could a more frightful temptation come to unseat virtue, to accuse eternal justice, or insult the existence of God, than such a supposition!*'

"I have heard these reasonings made, but must we thence conclude that the sceptre of the 7th August is to be broken immediately? No. Raising our view to universal order, the reign of Louis Philippe is but an apparent anomaly, but an unreal infraction of the laws of morals and equity: they are violated, these laws, in a limited and relative sense, but they are observed in a sense unlimited and general. From an enormity consented to by God, I shall deduce a consequence still weightier—I shall deduce the *Christian* proof of the abolition of royalty in France. It will be this abolition itself, and not an individual chastisement, which will be the expiation of the death of Louis XVI. None shall be admitted, after this just one, to cincture his brow solidly with the diadem—from the forehead of Napoleon it fell in spite of his victories, and from that of Charles X. in spite of his piety! *To finish the disgrace of the crown in the eyes of the people, it has been permitted to the son of the regicide to sleep for a moment in mock kingship in the bloody bed of the martyr.*

"Another reason, taken from the category of human considerations, may also prolong, for a short time more, the duration of the sophism government struck out of the shock of paving stones.

"For forty years every government in France has perished by its own fault: Louis XVI could twenty times have saved his crown and his life; the republic succumbed only by the excess of its crimes.—Bonaparte could have established his dynasty, but he threw himself down from the pinnacle of his glory; but for the ordinances of July, the legitimate throne would be still standing. But the actual government will not apparently commit the error which destroys—its power will never be suicidal—all its skill is exclusively employed in its conservation—it is too intelligent to die of folly, and it has not that in it which can render it guilty of the mistakes of genius, or the weaknesses of virtue.

"But, after all, it must perish. What are, then, four, six, ten, or twenty years in the life of a people? The ancient society perished with the Christian policy from whence it sprung. At Rome, the reign of a man was substituted for that of the law by Cæsar; from the republic was the passage to the empire.—Revolution, at present, takes a contrary direction; the law dethrones the man: from royalty the transition is to a republic. The era of the people is returned—it remains to be seen how it will be filled.

"But first, Europe must be levelled in one same system. A representative government cannot be supposed in France, with absolute monarchies around it. To arrive at this point, it is but too probable that foreign wars must be undergone, and that, in the interior, a double anarchy, moral and physical, must be traversed.

"If property alone were in question, would it not be touched? would it remain distributed as it is? A society, or individuals, have two millions of revenue, whilst others are reduced to fill bags with heaps of putrefaction, and to collect the worms from them—which worms, sold to fishermen, are the only means of existence to their families, themselves aborigines of the dunghill: can such a society remain stationary on such foundations, in the midst of the progress of ideas?

"But if property is touched, immense disorder will result, which will not be accomplished without the effusion of blood; the law of sacrifice and of blood is everywhere: God delivered up his Son to the nails of the cross, to renew the order of the universe. Before a new right shall spring from this chaos, the stars will often have risen and set.—Eighteen hundred years since the promulgation of Christianity have not sufficed for the abolition of slavery; there is still but a small part of the evangelic mission accomplished.

"These calculations go not quick enough for the impatience of Frenchmen. Never, in the revolutions they have made, have they admitted the element of time; this is why they will always be disappointed by results contrary to their hopes. Whilst they are disordering, time is ordering; it puts order in their disorder—rejects the green fruit—detaches the ripe—and sifts and examines men, manners and ideas.

"What will the new society be? I am ignorant. Its laws are to me unknown. I cannot conceive it, any more than the ancients could conceive the society without slaves produced by Christianity. How will fortunes become levelled? How will labor be balanced by recompense? how will the woman arrive at her complete emancipation? I know not.—Till now, society has proceeded by *aggregation* and by *families*: what aspect will it offer, when it shall be merely *individual*, as it tends to become, and as we see it already forming itself in the United States? Probably *the human race* will be aggrandized, but it is to be feared that *man* will diminish—that the eminent faculties of genius will be lost—that the imagination, poetry, the arts, will die in the narrow cavities of a bee-hive society, in which every individual will be no more than a bee—a wheel in a machine—an atom of organized matter. If the Christian religion should become extinct, man would arrive, by liberty, at that social petrifaction which China has arrived at by slavery.

"Modern society has taken ten centuries to arrive at its consistency. At present it is in a state of decomposition. The generations of the middle age were vigorous, because they were in a state of progressive ascendency; we are feeble, because we are in a progressive decent. This descending world will not resume its vigor till it has attained the lowest grade, whence it will commence to renascend towards a new life. I see, indeed, a population in agitation, which proclaims its power, exclaiming,—'I will—I am; the future belongs to me—I have discovered the universe. Before me nothing was known—the world was waiting for me—I am incomparable—my ancestors were children and idiots.'

"But have facts answered to these magnificent words? How many hopes in talents and characters have failed! If you except about 30 men of real merit, what a throng have we — libertine, abortive, — without convictions, without faith, political or religious, and scrambling for money and place like mendicants for a gratuitous distribution: a flock which acknowledges no shepherd—which runs from the mountain to the plain, from the plain to the mountain, disdaining the experience of their aged pastors—hardened to the wind and to the sun! We, the pastors, are only generations of passage—intermediate generations—obscure—devoted to oblivion—forming the chain reaching only to those hands which will pluck the future. * * * *

"Respecting misfortune, and respecting myself—respecting the cause which I have served, and which I shall continue to serve at the sacrifice of the repose due to my age, I fear to pronounce, living, a word which may wound the unfortunate, or even destroy their chimeras. But when I shall be no more, my sacrifices will give to my tomb the privilege of speaking the truth; my duties will be changed—the interest of my country will prevail over the engagements of honor from which I shall be freed. To the Bourbons belongs my life—to my country belongs my death. A prophet, in quitting the world, I trace my predictions on my declining hours—light withering leaves, which the breath of eternity will soon have blown away.

"If it be true that the lofty races of kings, refusing enlightenment, approach the term of their power, were it not better, and more in their historic interest, that they should, by an end worthy of their grandeur, retire into the sacred night of the past with bygone ages? To prolong life beyond its brilliant illustration is worth nothing. The world wearies of you and of your noise. It owes you a grudge for being there to hear it. Alexander, Cæsar, Napoleon, have all disappeared according to the rules of glory. To die gloriously, one must die young. Let it not be said to the children of the spring,—'What; is there still that name of past renown, that person, that race, at whom the world clapped its hands, and for whom one would have paid for a smile, for a look, for a hair, the sacrifice of a life!' How sad it is to see Louis XIV, in his old age, a stranger to the rising generation, and having none about him to speak to of his own age, but the aged duke of Villeroi! It was the last victory of the great Condé in his second childhood, to have met Bossuet on the borders of his grave; the orator re-animated the mute waters of Chantilly—the superannation of the old man so impregnated with his adolescence—he re-embrowned the locks on the front of the conqueror of Rocroi, by bidding an immortal adieu to his grey hairs. Men who love glory, be careful for your tomb—lay yourselves gracefully down in it—try there to make a good figure—for you will remain there!"

NEW-YORK AMERICAN.

AUGUST 24—29, 1834.

REVIEW OF THE WEEK.

HISTORY OF THE AMERICAN REVOLUTION, with a Preliminary Review of the Character and Principles of the Colonists, and their Controversies with Great Britain. 1 vol. *Baltimore:* CUSHING & SONS.—Though given to the world anonymously, this volume is understood to be from the pen of Mr. Wilson, the accurate and intelligent Editor of the Baltimore American. Those who have been in the habit of remarking, and profiting—as we frequently do—by the clear and well-condensed summaries of political and literary intelligence, which appear from time to time in that paper—will find in this historical abstract of the American Revolution, the same clearness of perception and statement, which, omitting matter less essential, presents, in a plain and popular form, all that is material and of enduring value, whether for warning or for imitation.

It is an original work wholly—that is to say, the author, after examining and comparing the histories and memoirs already extant, gives his own views, in his own language, of men and events. The preliminary View will, we think, add to the value of the work, for those especially for whose use it is particularly designed—the young.

A LECTURE ON MONEY AND CURRENCY, &c. &c. by WM. REID. New York: WM. STODART.—This well printed pamphlet contains the whole Lecture, of which some weeks ago we published a considerable part, delivered by Mr. Reid in Philadelphia. We spoke, at the time of making this extract, in terms of high commendation of this Lecture, and have only now to repeat, that it may be read with advantage even by the instructed, and certainly with much greater advantage to those who, desiring to know, are yet little informed, about the questions connected with the important, the difficult subject of currency. In an Appendix, the gold bills, passed at the last session of Congress, are published, as also the tables, drawn up by Mr. Reid, and which appeared in this paper, presenting at one view the comparative value of all the foreign gold coins which are legal tenders.

THE MOTHER'S FRIEND, or Familiar Directions for Forming the Mental and Moral Habits of Young Children: *New York;* LEAVITT, LORD & Co.—This little volume is another in what is called "Abbott's Series," all devoted to the improvement and right instruction of youth.

The author of this admirable little treatise—which is mainly a republication, as we find from the American editor's notice, of an English work, though different in form from the original, and with considerable modifications and additions appears to be—and we do not doubt is—a woman, and a mother.—There must of course, in such a work, be much that all parents, of well regulated and reflecting minds, have themselves considered; yet even to such, there are views presented in this volume, and counsels given, that will well repay perusal; while, to young mothers, it will be alike new and valuable.

The annexed extract is sensible, and the last paragraph but one specially deserving of attention:

But, (it may be said,) granting that parents are all you can desire, how is it possible to guard children from the evil influence which the example and conversation of others may create? And, unless you banish them entirely from the society of your friends and acquaintance, how can you prevent the impressions they may receive from worldly and puerile observations? We reply, these impressions are casual and transitory; the sentiments and behavior of occasional visiters are not often the subjects which attract the attention of very young children. They adopt, from sympathy, the feelings of those they love; and they scrutinize instinctively the characters and opinions of those on whom they depend, often only that they may avail themselves of the weak points in their characters, in order to gain their own ends.

Supposing, however, that the conversation of your young friends and acquaintance is decidedly of a kind you wish your children not to hear, you will do well to keep them away, while such acquaintance are with you. Gradually, as they become older, the danger will lessen, provided that you encourage in your children habits of the most unreserved openness and confidence with yourself. Lay yourself open to your children, heart and soul, as much as you possible can; this is a point of the most vital importance.

Let your own principles be founded on the one unerring standard of truth, and let your own conduct be firm and uncompromising; and let your children, as early as possible, read your genuine feelings, and see clearly the motives by which your conduct is regulated. Then you may fear less from the occasional inconsistencies and deviations from what is right, which all must be exposed to meet with in after life. If you are open with your children, they will return this openness. When they observe in others a conduct resulting from want of principle, they will communicate to you their surprise or indignation. Here will arise a case in which you must exercise your judgment and discretion.

You must, by no means, indulge in the habit of censuring and criticising the conduct of others.—Let them see that whenever you think there is a right or wrong, the opinions, or examples, or the ridicule of others, has not the slightest effect on your own conduct, but refrain from judging and blaming others except in cases of flagrant immorality.

Your children, while they know that the word of God is the standard by which you judge of yourself, and by which you endeavor daily to improve your own life, will not fail to remember, that in that same word, you are directed not to judge others, lest you should yourself be judged, and thus will their earliest associations tend at the same time to lay the foundation of rigid virtue, and tender charity.

U. S. MILITARY AND NAVAL MAGAZINE, for August: Washington, *B. Homans.*—We find much improvement, and more character and variety than usual, in this number, and look upon it as decisive that the two Services this periodical is devoted to illustrate, are giving it their active aid and countenance.

Among the articles which fixed our attention, is a letter signed "A Lieutenant of '16," addressed to Mr. Rush, in explanation of a fact stated in that gentleman's "Residence at the Court of London"—namely, that in going out from the Chesapeake, bound to Portsmouth, in the Franklin 74, they made the island of Bermudas. The singular circumstance of a ship bound from the Capes of the Chesapeake to England making the Bermuda Islands, as recorded by Mr. Rush, and dwelt upon by this writer, will doubtless attract the attention of nautical men; but the part of the letter which surprizes us, is that we copy,—implying, as it seems to do, extraordinary and almost incredible negligence, or want of skill, in the navigation of an American line of battle ship.

Previous to my being ordered on board the Franklin 74, I had had two years drilling among the currents of the Gulf of Mexico, and it was there I learned the important axiom "*to distrust the log,*" and the opposite one, "*to rely upon the heavenly bodies as the seaman's surest guides.*" Governed by these feelings, I felt a degree of uneasiness and restlessness at being so long without an observation, knowing, as I welldid, the ship had been operated upon by currents; supposing, however, with all the other officers, that she had been swept to the N. E., and consequently not dreaming of Bermudas, which there was reason to believe was some two hundred miles to the south of us.

On Friday night, at 10 o'clock, the weather began to clear up, and the north star became visible. Being possessed of an excellent sextant, I proceeded quietly and alone to measure a series of altitudes for the latitude. The horizon was well defined, and the observations were carefully and correctly made.—The calculation performed, I found, to my infinite surprize, the true latitude to be 32 degrees 54′. I doubted the result. New and more complex series of altitudes were observed with the same result. I still doubted, and supposed some accident must have deranged my instrument. I obtained from the sailing-master of the ship, the ship's sextant, and took a new series of observations; the result of which was still the *same:* at *noon* we were in longitude 66 degrees 10′, which, brought down to the time of observation, gave 65 degrees 56′. Here it is apparent, if the longitude was to be relied on, we were in a singularly dangerous position; at 10 o'clock in the evening, scarcely a degree from the most dangerous reef in the world, and steering directly for it. It is easy to calculate how many hours would place us there with an ordinary breeze, and it did not take much to send the Franklin ten knots. Having satisfied my own mind conclusively as to the latitude, and apprehensive that the longitude might prove correct, I communicated to Capt. Ballard the facts which I had ascertained. My report was not considered by him worthy of notice; indeed I was treated as a tyro; one whose remarks and observations were not worth listening to. It was in vain that explanations were attempted—in vain I represented the danger. Seeing clearly that my statement produced no effect, I took a very decided and hazardous step, for a young officer, to appeal to the commodore. Commodore S. was sought in the cabin, and the same facts communicated to him. He listened attentively to my representation, examined the matter carefully, but incredulously; felt assured there must be some error: pointed my attention to an error in one of the additions of the polar tables, the uncertainty of night observations, &c.; to all which I replied, that I had had two years drilling in the Gulf of Mexico, as first lieut. of a gun brig; that I had been in the constant practice of night observations, and that practice produced correctness; I therefore would vouch for the latitude. As it regarded the longitude, we had no better data for its correctness than the log; but respectfully submitted whether, under such circumstances, to run upon the threatened danger would not be imprudent. Though I felt sure that he was unconvinced, yet, acknowledging the force of the last argument, he went himself upon the deck and gave orders that the ship should not go faster than at a certain rate per hour until daylight, and the ship accordingly was restrained to the velocity of four miles per hour, as the log book indicates. The whole distance sailed from 10 P. M. to noon the following day, when we saw first the breakers and North rock ahead, and shortly after the islands of Bermudas, was fifty-five miles. Here then was a singular confirmation not of the latitude, for that I knew could be confirmed, if the sun were visible at meridian, but of our longitude by dead reckoning; and I now avow my surprize—operated upon as the ship was by strong, and, as we have reason to believe, opposing currents—that a calculation of the courses and distances steered, should still give the true longitude of the ship. Yet such is the truth, and for which I do not perceive any juster mode of accounting, than that the N. E. current of the stream, if any, was precisely counterbalanced by the southwest reflow on the inner and outer edge, and all the subsequent current setting a due south course. This I esteem to be the *vera causa* of the great aberration from the intended course. After this statement I am sure you will acknowledge the incorrectness of the assertion made by you, that to the surprize of all on board, we made the land. For myself, I must say, that had not the latitude at noon verified the observations of Polaris, I should not only have been surprized, but mortified.

THINGS AS THEY ARE, OR NOTES OF A TRAVELLER THROUGH SOME OF THE MIDDLE AND NORTHERN STATES. 1 vol. New York: HARPER & BROTHERS.—We have here the notes of a shrewd, observing, and intelligent man, who scans closely, and relates, with a dash of quiet humor, all that passes before him.

He is not censorious, nor—though his notions are sometimes, or will at least by many be thought so, a little queer—is he disposed to find fault. He is evidently a native, and a Yankee—two letters of recommendation. He neither adopts nor rejects customs nor opinions blindly, but gives frankly his reasons with his judgments.

We present the following extract, as a fair specimen of the descriptive powers and meditative tone of the writer.

When we observed the movements of men near at hand, the motives of their exertions and the results in which they end often excite our laughter; while if we contemplate them from a distance, and especially in large bodies, there is often something impressive and even exalted in the emotions which we experience. The very greatness of the mass, like the mountain or the sea, swells the mind which embraces it, and keeps its faculties, like so many arms and

hands, in a state of tension, which, if not distressing, is at least so tiresome as to remove all disposition to ridicule. When we descend to some little subject, the mind finds its powers in a great measure unoccupied; and as this is an unnatual state, it seeks employment in deeper investigations and new combinations, which, in the case of a subject abounding in such self-contradictions and unreasonableness as man, must inevitably lead one to pity and another to ridicule. Historians and warriors understand this matter, and endeavor to keep the eye of the world or of posterity fixed upon mea in masses, or on individuals at a distance. They often obscure, conceal, patch up, or pervert the truth, by representing the individuals in any thing but their every-day dress.

There is much that is ludicrous in the motley crowds rushing through Broadway at different hours; but when the city is seen in one view, the sight is a solemn one. If you are called to depart, or if you by chance arrive, in the dead of night, the vacancy and silence of the streets are exceedingly impressive. Two hundred and forty thousand people obeying the laws of nature at least in repose. The dead of night, strictly speaking, lasts but a very short time in the principal thoroughfares; for the termination of the play at about twelve, and of fashionable parties at one, keeps up a rumbling of carriages for an hour or two, until the most remote routes have been performed, and the horses returned to their stables. After this is over, half hours and even hours of almost total silence sometimes intervene, while the watchman, in the dome of the City Hall, proclaims to the ears of the sick and the watchful that another day is approaching, whether desired or apprehended by them.

A cannon is fired at break of day on Governor's Island; but before this the lines of milk, bread, and butcher's carts are in motion, and some come rattling down the island from above, while others are collecting at the ferries on the Long Island and Jersey shores, and all are soon dinning the streets. From the heights of Brooklyn you may hear their rattling, increasing from the feeble beginning, until, joined by the drays proceeding from the north to the south part of the city to their stands, it swells into an unintermitted roar, like the sound of Niagara at Queenston, to stop not till midnight. Some time after daylight, while the lamps at the steamboat docks are glimmering, and those in the streets which, by mistake, have had oil enough, the first smoke begins to rise from the houses of laborers in the upper wards. Some five or ten early risers are putting sparks to wood or coal; and their example is so contagious, that fires are speedily blazing in every house and almost every chimney in the city. In the cold season this is a singular sight; and when the wind is from the south in the morning, the heavy cloud which generally overhangs the city is blown northward, leaving the Battery in the light of the sun, while many of the other parts are deeply obscured. Soon after sunrise, floods of daily emigrants from the upper wards, meeting at Broadway and Canal street, pour down to the wharves, the mechanics shops, and the houses in building, many of them with convenient little tin-kettles, containing their dinners and preparations for heating them, all bound to their work. Then come the clerks of all degrees, the youngest generally first; and these, in an hour or therebouts, give place to their masters, who flow down with more dignity, but scarcely less speed, to the counting-rooms of the commercial streets, hundreds of them, especially in unfavorable weather, in the omnibuses, which render the street so dangerous now at three or four o'clock in the afternoon. Ere these crowds have disappeared, they become crossed and mingled with some of the fourteen thousand children who go the public and primary schools at nine, and an unknown number who frequent the private schools of all sorts. Then are seen also the students of Columbia College and the University, the medicals in winter hurrying to Barclay street, lawyers, clients, and witnesses gathering about the City Hall, the Marine, and Ward Courts, with a set of spectators generally selected from those classes who have been ruined by the same process which is about to be repeated in the name of the State.—A burnt child dreads the fire, but a singed cat loves the chimney-corner.

The apple-women and orange-men at St. Paul's see a motley crowd passing from ten till twelve; and if it be a showery day, the shop-keepers have a good deal of conversation with chance visiters stepping in for shelter. After this, if the sky permits, (for bad walking is but a small objection) the fashionable promenading begins; and the window-glass has full employment in reflecting the forms and colors of dresses which vary with the moon.—The movements of the crowd are now at common time, instead of the double quick step by which the business man is distinguished. A stranger would think that New York was a city of idleness, gayety, and wealth. But let him turn down almost any street at the right or left, and enter some of the dwellings of the industrious poor, and he would find all were not rich or unoccupied; let him glance at the chambers of others, and he would be convinced that some are wretched and in want of all things. Yet he need not blame too severely the gay and young for being so regardless of the sufferers near them; they know not of their existence, or realize not their own ability to aid them. All parents do not estimate the value of engrafting practical and systematic benevelence upon their plan of education, and rather teach their children by example to despise the poor, than to regard them as beings offering occasions of moral self-improvement to the rich.

But it would be too long to tell all the aspects and fluctuations of the currents for a single day in the capital, or even to trace the course of a single drop, like myself, circulating one tour round the system. It is enough that the clocks and watches go on with their seconds and hours as if they marked no appointments for friendly or formal visits; no periods of payment, for persons who would prefer to keep their sixpences or their thousands; no departures or arrivals of cargoes; no changes in stocks—in short, as if prosperity or adversity, wealth or poverty, joy or disappointment, were not decided by every revolution of the hands for thousands of anxious individuals.

It is a solemn reflection, after the bustle has passed, and the traveller again contemplates empty streets and noiseless pavements, deserted stores and silent wharves, while weary bones are resting, the anxious busy at their dreams, and the sick and dying, or their attendants, alone conscious of the hour, that two hundred and forty thousand persons have spent another day. The time has rapidly passed, but in it how many millions of property have changed hands; what applications of capital have been determined upon, which will increase the comforts of whole districts of country; what plans have been devised by consummate commercial skill; how many a generous deed has been done with wealth honorably obtained; how many a piece of gold added to the miser's hoard! In that short space of time how many a tear has been shed by parting friends; how many a smile made by those who have returned; how many a foreigner has first touched the soil of America; how many a traveller, like me, has closed his visit to this busy city!

Initia Latina, or the Rudiments of the Latin Tongue, illustrated by progressive exercises; by Charles H. Lyon, one of the Classical Instructors in the Grammar School of Columbia College. *New York*: Harper & Brothers.—This new grammar, or rather *Accidence*—as in our younger days the elementary book of the Latin language was called—is, in the first place, very prettily printed, on very nice white paper: it is, too, accurately printed, and the marks of quantity are placed over syllables, so as to guide the eye even before the ear becomes instructed. We like it altogether much—but not without qualification. We object, for instance, to the change in the designation of the conjugations; which, instead of the old and universal first, second, third, and fourth, are called "*Stem* Conjugation, E Conjugation, A Conjugation, and I Conjugation." The reason assigned for this is, that the third conjugation, having *e* short before *re* and *ris*, as the old Eton grammar has it, is the oldest, and that from it the others are derived. On this ground it is called—at the suggestion doubtless of Professor C. Anthon, who is vouched as godfather for the new nomenclature—the *Stem* Conjugation: then follows the present second under the name of E Conjugation. The old first is degraded to third; and the fourth is as it was, only under a new name.

It is always inexpedient, when obvious and urgent motives do not plead for it, to change old and well established designations. It is particularly so in school books, for this, among other reasons, that boys who have not studied the new book with the new names, are—if brought into a school where these are in vogue—nonplussed at the outset, and have to begin over again a journey, never very inviting at best.—In the present instance, we perceive no possible advantage in the change, which seems founded in mere whim, or conceit, (in the Italian sense.)

The division of the long and short syllables in the "stem conjugation," seems to us objectionable.—*Leg–e*, when the *e* is short, would be pronounced, as it is intended to be, as though written with two *g's*; *Leg–i*, when the *e* is long, should, in order not to mislead the eye, be divided thus—*Le-gi*.

Two Old Men's Tales—*The Deformed—The Admiral's Daughter*—2 vols. N. Y.—*Harper and Brothers.*—From some similarity in the title, or rather from the introduction of the awkward, and to most, unwelcome monosyllables, "Old Man," in each, these thrilling and highly wrought tales have been ascribed to Sir Francis Head, the author of "The Bubbles, by an Old Man." We suspect erroneously, however; though they evince a power of language, and of delineation of character and passions, that would not discredit the admirable sketches of the *Baden of Nassau*.

The first story, the Deformed, is a short one, scarcely filling more than half of a thin volume. The other occupies the remainder of the two volumes, and will be preferred. We will not give even a glimpse of either.

Boys' and Girls' Library of Useful and Entertaining Knowledge, Vol. XXI. N. Y.—Harper and Brothers.—We delight to meet again in this volume with *Uncle Philip*, whose contributions to this really useful and instructive Library, printing by the Harpers, are not its least attraction.

When last we parted with Uncle Philip, it was after reading and warmly recommending his book on the Evidences of Christianity. We hear him now telling the story of the Discovery, Settlement, and History of Virginia, up to the period of the Declaration of Independence. The marvellous adventures of Captain Smith—the romantic story of Pocahontas—the hardships and sufferings of the first Colonists, combine to impart great interest to the History of Virginia; and of this, none is lost in adapting the narrative to the comprehension of children, and making it assume the form of dialogue. We agree with Uncle Philip, "that it is very important that all the boys and girls in America should know something about the early history of their own country;" and we hope, therefore, he will go on in providing them just such incentives to do so, as they will find in the History of Virginia.

The Constitution of the United States in Gold Letters: *C. C. Wright & H. Durand, N. Y.*—We mentioned, last week, the beautiful copy of the Declaration of Independence which had just then been issued from the Xylographic press of Messrs. Wright & Durand, of this city; and now have before us, in the same style of beautiful printing and elegant ornament, the Constitution of the United States, with the amendments thereto that have been adopted. We wish this may be generally purchased, for the instrument cannot be too often in sight.

Extract from one of Mr. Sharp's Letters, recently published in London,—

"There are few difficulties that hold out against real attacks; they fly like the visible horizon before those who advance. A passionate desire and an unwearied will can perform impossibilities, or what seem to be such to the cold and the feeble. If we do but go on, some unseen path will open among the hills. We must not allow ourselves to be discouraged by the apparent disproportion between the result of single efforts and the magnitude of the obstacle to be encountered. Nothing good nor great is to be obtained without courage and industry; but courage and industry must have sunk in despair, and the world must have remained unornamented and unimproved, if men had not nicely compared the effect of a single stroke of the chisel with the pyramid to be raised, or of a single impression of the spade with the mountain to be levelled. All exertion, too,

is in itself delightful, and active amusements seldom trie us. Helveitus owns that he could hardly listen to a concert for two hours, though he could play on an instrument all day long. The chase, we know, has always been the favorite amusement of kings and nobles. Not only fame and fortune, but pleasure is to be earned. Efforts, it must not be forgotten, are as indispensable as desires. The globe is not to be circumnavigated by one wind. We should never do nothing. 'It is better to wear out than to rust out' says Bishop Cumberland. 'There will be time enough for repose in the grave,' said Nicole to Pascal. 'As a young man, you should be mindful of the unspeakable importance of early industry, since in youth habits are easily formed, and there is time to recover from defeats. An Italian sonnet justly, as well as elegantly, compares procrastination to the folly of a traveller who pursues a brook till it widens into a river, and is lost in the sea. The toils as well as risks of an active life are commonly overrated, so much may be done by the diligent use of ordinary opportunities; but they must not always be waited for. We must not only strike the iron while it is hot, but strike it till it is made hot. Herschel, the great astronomer, declares that ninety or one hundred hours, clear enough for observations, cannot be called an unproductive year. The lazy, the dissipated, and the fearful should patiently see the active and the bold pass them in the course. They must bring down their pretensions to the level of their talents. Those who have not energy to work must learn to be humble, and should not vainly hope to unite the incompatible enjoyments of indolence and enterprize, of ambition and self-indulgence. I trust that my young friend will never attempt to reconcile them."

We add some others, addressed to a young man:

Luckily you have not to overcome the disadvantage of expecting to inherit from your father an income equal to your reasonable desires; for though it may have the air of a paradox, yet it is truly a serious disadvantage when a young man, going to the bar, is sufficiently provided for.

"Vitam facit beatiorem
Res non parta, sed relicta,"

says Martial, but not wisely; and no young man should believe him. The Lord Chief Justice Kenyon once said to a rich friend asking his opinion as to the probable success of a son, "*Sir, let your son forthwith spend his fortune; marry, and spend his wife's; and then he may be expected to apply with energy to his profession.*" In your case I have no doubts but such as arise from my having observed that, perhaps, you sometimes may have relied rather too much on the quickness of your talents, and too little on diligent study. Pardon me for owning this, and attribute my frankness to my regard. It is unfortunate when a man's intellectual and his moral character are not suited to each other. The horses in a carriage should go the same pace and draw in the same direction, or the motion will be neither pleasant nor safe.

Buonaparte has remarked of one of his marshals, "that he had a military genius, but had not intrepidity enough in the field to execute his own plans;" and of another he said, "he is as brave as his sword, but he wants judgment and resources: neither," he added, "is to be trusted with a great command." This want of harmony between talents and the temperament is often found in private life; and wherever found, it is the fruitful source of faults and sufferings. *Perhaps there are few less happy than those who are ambitious without industry; who pant for the prize, but will not run the race.* New, this defect, whether arising from indolence or from timidity, is far from being incurable. It may, at least in part, be remedied by frequently reflecting on the endless encouragements to exertion held out by our own experience and by example.

"C'est des difficultés que naissent les miracles."

'It is not every calamity that is a curse, and *early* adversity especially is often a blessing. Perhaps Madame de Maintenon would never have mounted a throne had not her cradle been rocked in a prison.—Surmounted obstacles not only teach, but hearten us in our future struggles; for virtue must be learnt, though unfortunately some of the vices come, as it were by inspiration. The austerities of our northern climate are thought to be the cause of our abundant comforts; as our wintry nights and our stormy seas have given us a race of seamen, perhaps unequalled, and certainly not surpassed, by any in the world.

'"Mother," said a Spartan lad going to battle, "my sword is too short." "Add a step to it," she replied: but it must be owned that this was advice to be given only to a Spartan boy. They should not be thrown into the water who cannot swim: I know your buoyancy, and I have no fears of your being drowned.'

Another letter to the same young man has these sensible passages:

'If your low spirits arise from bodily illness (as is often the case,) you must consult Dr. Baillie. I can do nothing for you. Perhaps you should fast a little, and walk and ride. But if they are caused by disappointment, by impatience, or by calamity, you can do much for yourself. The well-known worn-out topics of consolation and of encouragement are become trite, *because they are reasonable;* and you will soon be cured, if you steadily persevere in a course of moral alteratives. You have no right to be dispirited, possessing as you do all that one of the greatest as well as oldest sages has declared to be the only requisites for happiness—a sound mind, a sound body, and a competence.

'An anxious, restless temper, that runs to meet care on its way, that regrets lost opportunities too much, and that is over-painstaking in contrivances for happiness, is foolish, and should not be indulged

"On doit être heureux sans trop penser à l'être."

"If you cannot be happy in one way, be happy in another; and this facility of disposition wants but little aid from philosophy, for health and good humor are almost the whole affair. Many run about after felicity, like an absent man hunting for his hat, while it is on his head or in his hand. Though sometimes small evils, like invisible insects, inflict great pain, yet *the chief secret of comfort lies in not suffering trifles to vex one, and in prudently cultivating an undergrowth of small pleasures, since very few great ones, alas! are let on long leases.* I cannot help seeing that you are dissatisfied with your occupation, and that you think yourself unlucky in having been destined to take it up, before you were old enough to choose for yourself. Do not be too sure that you would have chosen well. I somewhere met with an observation, which being true, is important—*that in a masquerade, where people assume what characters they like, "how ill they often play them!"* Many parts are probably preferred for the sake of the dress; and do not many young men enter into the navy or army, that they may wear a sword and a handsome uniform, and be acceptable partners at a ball? Vanity is hard-hearted, and insists upon wealth, rank, and admiration. Even so great a man as Prince Eugene owned (after gaining a useless victory) that "on travaille trop pour la Gazette."—Such objects or pursuits are losing their value every day, and you must have observed that *rank gives now but little precedence, except in a procession.*

'But I am really ashamed even to hint at such endless, and obvious commonplaces, and I shall only repeat the remark, which seems to have struck you—that in all the professions, *high stations seem to come down to us, rather than that we have got up to them.* But you, forsooth, are too sensible to be ambitious; and you are, perhaps, only disheartened by some unforeseen obstacles to reasonable desires. Be it so! but this will not justify, nor even excuse, dejection. Untoward accidents will sometimes happen; but, after many, many years of thoughtful experience, I can truly say, that nearly all those who began life with me have succeeded or failed, as they deserved.

"Faber quisque fortunæ propriæ." Ill fortune at your age is often good for us, both in teaching and in bracing the mind; and even in our later days it may be often turned to advantage, or overcome.—Besides—*trifling precautions will often prevent great mischiefs; as a slight turn of the wrist parries a mortal thrust.*'

SUMMARY.

"Our worst apprehensions, (says the National Intelligencer of yesterday) for the safety of the expedition to the far West, composed of the regiment of Dragoons, &c. already begin to be realized. Brigadier General LEAVENWORTH, who commanded it in chief, is no more—he died of bilious fever, at a place called Cross Timbers, on the 22d of last month; and one or two other officers are reported to be ill. The command, by the death of Gen. L. devolved on Gen. Dodge, the Colonel of the Dragoons. The first act of his command, we hope to learn, will have been to cause the expedition to retrace its steps. We shall await with anxiety further intelligence of its movements."

The Little Rock Advocate, of 8th August, in confirming the report of the death of Gen. Leavenworth, adds that Lieut. McClure, of the dragoon corps, had also died of the same disease.

We have seen a letter dated Camp Washita, which describes the condition of the Dragoons as deplorable; the horses worn out, and disease among the men. Lieut. McClure, as well as Gen. Leavenworth, had died. There were 140 on the sick list. Col. *Dodge* has pushed on, on the 7th July, with 350 men, and no intelligence had been received from him up to the date of the letter we refer to.

A single officer, and five men carrying the coffin, constituted the whole funeral escort of Gen. Leavenworth.

The barque Mexican, which arrived at this port on Saturday from Vera Cruz, brought between $90,000 and $100,000 in specie.

The Hon. John Branch has been elected to the Senate of North Carolina from the county of Halifax. It is not improbable, we think, that Mr. Branch may find himself a Senator in another body before he is six months older;—at least we will venture to predict such an event will not be prevented by the re-election of Mr. Brown, whose term in the United States Senate expires on the 4th of March next.

[*From the Boston Atlas.*]

Robert G. Davis, a youth born at the Sandwich Islands, and about 15 years of age—received the *first* medal and delivered the Valedictory address—at the recent examination of our Puclic Schools.

Presentation of Plate.—The passengers by the Columbus, from New York to Liverpool, have presented a superb piece of plate to Capt. Cobb, in acknowledgment of his gentlemanly conduct, his skill as a navigator, and the splendid manner in which he catered for them during the voyage.

Steamboat Disaster and loss of Lives.—The Cincinnati papers contain the following particulars of the accident to the steamboat Nimrod, which, on Saturday night, the 16th, at 9 o'clock, while bound down the river, ran aground on Quick Run Bar, ninety miles above Cincinnati. The connecting pipe between the boilers and cylinder immediately burst. Twelve persons, principally passengers, were scalded, eight of which have since died. The Helen Mar opportunely arrived shortly after the accident, and took the passengers on board. She arrived at our landing late on Sunday night, and her deck presented a melancholy spectacle of the dead and dying—three or four deaths having occurred since her arrival. The names of those who have died, are Augustus Fromid, or Frowm, wife and child, dead; they were citizens of Hamilton, Butler county, Ohio. John Botest, or Baptista, from Wheeling, dead. Our fellow citizen, Mr. Aaron Valentine, city Councilman of the 4th Ward, was badly scalded, his wife slightly, and his child to death. Jane Ranaharn and child, dead, from Cumberland, Allegheny county. George Street, from Frankfort, Pa., and Washington Bishop, from Maryland, scalded, but not badly.

The Helen Mar brought the passengers of the Nimrod to our city. While we are writing this, the bodies of the dead are about being placed in their coffins. By some of the papers it is stated that the Nimrod ran on some stones which were thrown from a flat boat about a year since in the river.

BOSTON, TUESDAY, AUG. 26.—*Mr. Durant's Eleventh Ascension.*—Yesterday afternoon, agreeably to previous notice, Mr. Durant made his eleventh grand ascension (it being his second from Boston,) from his amphitheatre on the city land west of Charles street. The day was pleasant, and the wind was blowing with a pretty strong breeze from the north-east.

Six o'clock. We have this moment the satisfaction of hearing of Mr. Durant's safe arrival with the balloon at the Tremont House, where he was welcomed by the shouts and congratulations of a large collection of people. We learn that at 5 h. 6 m. he landed safely in a field west of Mount Auburn, and about six miles from the Amphitheatre. He was, therefore, 36 minutes in the air, and one hour and a half from his starting to his arrival at the Tremont House. He brought the rabbit with him, and it was exhibited in front of the Tremont. The parachute is in the shape of a large umbrella.

It happened that every thing was in readiness for the ascension at an earlier hour than was anticipated and consequently the balloon started at half past 4 instead of 5 o'clock, as had been announced In consequence of this, we regret to say that many people were too late to see the balloon at starting.—

To enable such people to witness the operation, and to afford every body another opportunity to see the magnificent spectacle, it is hoped that Mr. Durant will undertake a third ascension from Boston.—As the balloon is uninjured, an early day would probably be convenient for the intrepid aeronaut, as it would be desirable to our citizens generally.

Specie.—The amount of Specie arrived at this port, from 28th March to 30th June was, $4,365,467
From 30th June to 21st Aug. 530,935

$4,896,402

The vessels just arrived from Havre, bring a good deal of specie in five franc pieces.—[Journal of Commerce.]

[*From the Albany Evening Journal.*]

Death of Senator Hasbrouck.—We find the following melancholy intelligence in this morning's Argus :—

It is with deep regret that we have to announce the death of the Hon. Louis Hasbrouck, a Senator in the Legislature of this State, from the fourth District.—He died of apoplexy, at his residence in Ogdensburgh, on the 20th inst. His loss will be severely felt in the counsils of the State and in all the relations of life.

Mr. Hasbrouck was a most valuable citizen. He removed from Ulster County, at an early day, to Ogdensburgh, where for more than 20 years, he has been an able and respected member of the bar. He was a member of the Legislature in 1814.

Charleston, Aug. 15th.—*New Cotton.*—Three bales of the new crop were received this morning from Augusta, by the railroad, the same noticed in the Augusta Chronicle as having been raised on the plantation of Col. Paul Fitzsimon's and sold in that place, on the 12th inst. The quality is very good.—Two of the bales are about to be shipped to New York.—[Patriot.]

New Orleans, August 9—*A new Exchange.*—We understand that at the monthly meeting of the Chamber of Commerce, held on Monday evening at their Chamber in Canal street, it was proposed and agreed to, that a committee be appointed to report to the next monthly meeting, the most eligible site upon which to erect an Exchange in our city, suitable to the great commercial interest of New Orleans. The following gentlemen were appointed as said Committee, viz.: M. Morgan, Thomas Barret, J. F. McKenna, John Garnier, H. C. Cammack.

This movement will meet the approbation and concurrence of our whole community, unquestionably, and we hope lead to the erection of an edifice, such as proposed.

Bermuda.—Accounts from this Island to the 12th inst. have been received. On the 1st of August, the day on which the liberation of the slaves took place, divine service was held in the churches, and every thing was not only tranquil but solemn. Apprehensions however are entertained that the new freedmen will suffer for want of employment. The families had generally reduced the number of servants below the number of those they had held as slaves —[Gaz.]

Sea Serpent.—In the vicinity of Cape Rosier, near Castine, Me., a Sea Serpent was seen for several days during the first fortnight in July, by a large number of credible persons. When seen in the morning, he usually carried his head about twelve feet above water; but in the afternoon his head was not so much elevated. His rate when passing through the water was sometimes incredibly rapid, leaving a long "wake" behind. In one instance, he was seen at a distance by the crew of a fishing schooner off Cape Rosier, three of whom got into a boat and rowed towards him. When they had proceeded some distance from the vessel he came directly towards them, boldly, and after approaching within a rod, with his head elevated, he went below the surface and passed under the boat, being in plain sight as he passed. Two of the men had muskets loaded, which they pointed at him as he approached; but his appearance was so formidable they thought it prudent not to fire unless he attacked them. He appeared to them, and to others who saw him at different times, to be about sixty feet long; and hence it may be inferred that there are several of these animals on our coast, as the serpent seen in this neighborhood has been often estimated by good judges to be nearly twice the length of that seen near Cape Rosier.

Another man who was taking fish out of the mesh es of a net at the Cape, observed some disturbance in the water, and soon after ascertained that the Sea Serpent was helping himself at the other end of the net. Not liking his company, the man hastily withdrew.—[Boston Daily Advertiser.]

Appointment by the President.—William Littl field, to be Collector of the Customs for the District of Newport, Rhode Island, in the place of Christopher Ellery, resigned.

Officers attached to the United States sloop of war Erie, sailed for the Coast of Brazil.

John Percevel, Esq, Commander; Jas. Williams, 1st Lieut.; John Pope, 2d do; Henry Eagle, 3d do; John E. Bishophain, 4th do; Chas. Chase, Surgeon; Grenville C. Cooper, Purser; Alfred Taylor, Acting Master; Jacob Zelin, Jr. Lieut. Marines; Ninian Pinkney, Assistant Surgeon; John A. Russ, passed Midshipman; John R. Tucker, do; Hendrick N. T. Dade, Thos. F. Davies, Carter W. Poindexter, Fred. A. Bacon, John L. Horden, Henry A. Warden, Nathan Harris, Geo. Wells, Midshipmen; Nathaniel B. Reed, Sailmaker; Edward Crocker, boatswain; David Marple, carpenter; Wm. Phillips, acting gunner; Daniel J. Browne, school master; David Selfain, assis't. clerk; Archibald A. Peterson, pursers steward.

The following letter explains the changes, and the motives for making them, in the coinage of the new issues of gold.

Mint of the United States,
Philadelphia, 9th July, 1834.

Sir: The certified copy of the Act relative to the Gold Coins of the United States, forwarded with your letter of the 7th, has been received.

In regard to your suggestion of affixing to the gold coinage, after the 31st inst. the date of the month, to designate the new coins from others of the current year, I have respectfully to observe, that for the purpose of such designation, the engraver has been directed to execute new dies, in which two improvements, contemplated for some years past, shall be introduced; one is, the omission of the words "E pluribus unum" on the reverse; the other is, the substitution of a new Head of Liberty without the dress-cap—the hair being only restrained by the cincture bearing the inscription 'Liberty." * *

The cap has by many been regarded as intended for the classic cap of liberty, and under this idea has received favor, as proper to be retained, even with some who have not been insensible that it impaired the beauty of the coin. I have, however, to remark, that the cap on our coins was not designed as the Liberty Cap. It was not introduced on the silver coins until about the year 1806, and was then copied from what was considered a handsome specimen of the female head-dress of that day. On the gold coins a cap had been introduced from the first, which has certainly some resemblance to the usual form of the Cap of Liberty. I am however satisfied, from several considerations, and indeed have the direct assurance of Mr. Eckfeldt, the chief coiner, who has been familiar with the whole subject from the first, that it was not so intended. When a cap was introduced, as before stated, on the silver coin, that on the gold was conformed thereto.

It is wholly at variance with classic authority to place the Pileus, or Liberty Cap, on the head of the figure representing Liberty. When it is introduced in statuary, or on a medal, or on a coin, it is found borne by Liberty herself on a wand, or in her hand, or appears at her feet, and indicates her as the beneficial being through whose influence the blessings of freedom are conferred on others: and such a cap, placed on a freed-man, we know from the Roman annals, was the insiguium of his freedom.

This view of classic propriety was, no doubt, very familiar to those under whose authority the first coinage of the United States commenced. The early copper coins bear the Cap of Liberty, but never on the head of the figure. The coinage of France of that period, presents also various pertinent examples in point.

It may be sattsfactory further to remark, that soon after my appointment to the charge of the Mint, I addressed to Mr. Jefferson, who at the commencement of the Mint was a member of the Government, then resident in this city, an inquiry in regard to the authority on which the devices on our coins had been originally adopted, and particularly presented the question as regards the cap on the head of Liberty. His recollection, he informed me, did not reach the subject, and no notes had been preserved in regard to it; but he was direct and explicit as to the unfitness of placing the Pileus or Cap of Liberty on the head of the figure—adding, "for we are not emancipated slaves." * * * * *

I have the honor to be, with great respect, &c.

Samuel Moore.

Hon. Levi Woodbury,
Secretary of the Treasury.

We regret to announce the resignation of the Hon. Rufus Choate, Representative in Congress from Salem District. But we are happy to state that he is to become a resident of our own city, and devote himself to his professional pursuits.—[Boston Atlas.]

Yale College.—The annual Commencement of this Institution was celebrated at New Haven on Wednesday last. Number of graduates 64. The honorary degree of A. M. was conferred on Joshua A. Spencer, Esq. Rev. Erastus Cole, and Edmund J. Ives. That of D. D. on Rev. Andrew Reed, and Jas. Matheson, the English delegates, the latter of whom was present. That of LL. D. on Hon. Samuel A. Foot, Governor of the State, and Hon. Thomas Scott Williams, chief justice elect. On the day previous, at 11 o'clock, A. M. the annual oration before the Phi Beta Kappa Society was delivered by James A. Hillhouse, Esq. His subject was "the character and services of Lafayette." At 2 P. M. an oration was delivered before the Linonian Society, by Rev. W. W. Andrews of Kent, Conn. At half past 3, the usual Prize speaking by undergraduates. In the evening, the Society of Alumni held their annual meeting. An address was made by Lucius Duncan, Esq. of New Orleans. The Society has now a fund of between 3 and 4 thousand dollars, the increase of which they have resolved to apply for the support of a lecturer on Natural History. The lectureship is filled by Charles U. Shepard Esq.—[Journal of Commerce.]

A Quarantine, as we learn by the Charleston Patriot of the 15th instant, was established on that day for all vessels, including steam packets, *arriving from New-York.* This, we are to presume, is an Anti-Cholera precaution.

Tornado in Mass.—The Northampton, Mass. Gazette contains some particulars of the tornado in that vicinity, on the 14th inst. The length of its path, so far as yet heard from, was about 30 miles, passing through Peru (Berkshire County) Worthington, Cummington, Goshen, Williamsburg and Whately, (all in Hampshire County) to Connecticut river. Its course was about due East.

In Cummington the width of the gale was from half to three fourths of a mile. The barns of Oren Tower, ——— Tower, Mr. Everett, Jesse Reed, Widow Scott, Stephen Shaw and Asa Bates were blown down. Widow Scott's house was much injured.

All the timber on James King's farm was prostrated, two large sheds were destroyed and his house and barn injured. Joshua Hayden had 30 or 40 acres of heavy timber, but not a tree (except some small ones) is left standing on his farm, hardly an apple tree remains upright in his orchard, and all his rail or wood fence is gone.

His house, barn, and cider-mill were damaged.—N. Warner, S. Shaw, Robt. Webster and others lost much valuable timber. The buildings and orchard of Nahum Bates were injured. Indeed, almost every thing within the range of the tempest in Cummington was more or less injured. A cow belonging to Asa Bates was killed, and several persons lost sheep.—Some of the forest trees were torn up by the roots and others twisted off. The direction of the storm was from west to east, but many of the trees fell to the north, and some to the west.

In Goshen, Maj. Ambrose Stone had 15 or 20 acres of valuable timber destroyed; Mr. Narramore's barn was unroofed., and his house damaged. Capt. Narramore's timber and orchard were blown down; Hinckley Williams had one barn uncovered and the roof carried away; Wm. Packard's barn and Mr. Tilton's barn were destroyed; the congregational meeting house was partly unroofed; the Baptist meeting house had several holes made in it by sticks of timber forced against it by the wind, and it is said the whole building was removed several inches.

[The old gentleman, who, with his grandson, was blown down a precipice in Cummington, was Mr. George Stearns, of Goshen. In the latter township, a man upon the road, was lifted from his wagon and carried senseless to the side of a wall. Upon recovery he found his horse and wagon in a neighboring corn field.]

We are informed that one house was demolished in Peru, and another house and two barns much damaged. There was great destruction among the timber. It is reported that a house in the southern part of Windsor was carried away. Much damage was done in Whately and the north part of Williamsburgh, but we have not learned particulars. We are told that a man whose farm lies in Worthington and Cummington had a quantity of grain in the shock in his field; and on examining the field the next morning, not a sheaf of grain could be found.

Missionary Meeting.—Seven missionaries, being about to embark from this city for Smyrna during the present week, received their instructions on Sabbath evening, in the Essex-street Church. The house was full, and the services were very interesting and impressive. The instructions were read by the Rev. Mr. Wisner, one of the Secretaries of the American Board of Foreign Missions. Addresses were made by the Rev. Mr. Winslow, late Missionary to Ceylon, and Rev. Dr. Beecher; introductory prayer by the Rev. Dr. Jenks. Mr. Winslow's address was specially to the Missionaries, and was highly practical and to the point. He bade them discard all romantic ideas, and to expect discouragement and disappointment; cautioned them against indolence and self-confidence; and inculcated the virtues of humility, unity of spirit, cheerfulness, faith, patience, and perseverance. All his remarks were delivered in an affectionate manner, and an experience of fifteen years abundantly qualified him to point out the difficulties of missionary life. Dr. Beecher remarked, that infidels reasoned correctly upon human principles, that we should not convert the world by sending out a few Missionaries, but they left out of view the Holy Ghost, which was promised by our Redeemer. The power of God was with the feeble arm of the solitary Missionary. He dwelt much upon the success which had crowned the cause, the revivals of religion at Missionary stations and at home, since the first five Missionaries were sent from this country. We had taken care of home, too, and had received back with interest the blessings we had poured upon foreign shores.

The Missionaries are Rev. John B. Adger and wife, of South Carolina; Rev. Samuel R. Houston and wife, of Virginia; Rev. Lorenzo W. Pease and wife, of the State of New York; and Rev. James L. Merrick, a native of Massachusetts. Mr. Merrick is designated to the Mahomedans of Persia; Mr. Adger to the Armenians, to reside at Smyrna or Constantinople; Mr. Houston and Mr. Pease to the Greeks; the former to be stationed on the island of Scio, the latter on the island of Cyprus.—They sail to-morrow in the brig Padang, for Smyrna.—[Boston Commercial.]

[*From the Pittsburgh Gazette.*]

REMARKABLE.—Mr. Montgomery the jailor of the county handed us the following communication, which he says was written by one of the prisioners. The falling of the stone he assures us, was witnessed by many, perhaps all the prisoners, some of whom are in confinement for debt, others charged with crimes.—He, himself, was in the county on that evening, but he declares that he has no doubt of the truth of their story.—He says that he picked up muscles on the next morning.

Remarkable Circumstance.—On Saturday evening, the 9th instant, about five o'clock, the southwestern hemisphere became suddenly overspread by heavy dark clouds, which indicated the fast approach of a storm, which was carried swiftly along by the angry wind, which smote the earth as though the very elements were at war with each other—soon the water began to gush from its cistern. During the extreme part of the rain, some of the prisoners in jail observed something falling, resembling the small stone that may be seen on the beach of a river—What first attracted attention was the rattling upon the bricks in the yard. When the storm had subsided, the prisoners were not a little astonished as well as delighted, at finding that, not only the inactive stones were to be found, but that numbers of living muscles had been removed from their native element, and were ready for gathering within the jail walls—the number found is not accurately known, as some went immediately to work on the fresh dainty, opening, salting and swallowing—until they were consumed: one person, however, picked up ten before the others were informed that the yard abounded with fresh mussels—some of them, from appearance, must have weighed two ounces; there were also several round stones found, one of which would weigh four or five ounces, and which may yet be seen—on the same evening, there were some frogs taken captive, whilst hopping about, apparrently rather dissatisfied in finding themselves confined within the jail walls—the ancients cannot reccollect of such visiters making their appearance within the walls before.

r. Montgomery (keeper of the prison) found some of the muscles outside of the wall. It is requested that some of the learned would cast some light upon this mystery, and solve to us how those emigrants left their watery home, sailed into the air, and landed inside the jail walls.

An Inquirer after Knowledge.

We cannot refrain from asking public attention to the account which follows, of the means of education in a little German principality, which, though called the *Grand* Duchy of Baden, is not half as large as this State of New York.

It is taken from the London Courier, through which paper an intelligent writer is addressing a series of letters to Lord Althorp, recommending the German system of schools and instruction as models for England. Here our Common Schools much need improvement, and possibly useful hints may be derived from statements such as that we now present.

Education in Baden.—I am now about to give the details of a well organized system of public instruction in a state which may be looked upon as purely agricultural—a state where education is compulsory by law, but where the law, without being severely enforced by the government, is very generally respected by the people—I mean the Grand Duchy of Baden. By your permission, I will begin with a few statistical facts, which may afford data for calculations in regard to England, relative to the object I have in view.

The Grand Duchy of Baden contains about 5929 3.5 square miles of territory, with a population of about 1,220,000 inhabitants, comprised in 110 cities and towns, 36 market towns, with 1,686 villages.—The price of beef and mutton, in almost all parts of the Grand Duchy, varies in the course of the year from 9 to 11 kreutzers, or from 3d to 3d 2-3; and the pound of the best wheaten flower is on an average 2d 2-3 in the three winter months. This calculation of prices has been made from places at the extremes of the Grand Duchy. The reigning family is Protestant, the people Protestant and Catholic, and the followers of both religions, with no apparent difference of feeling on the subject of education, show an equal degree of willingness in sending their children to the schools.

The Catholic inhabitants, 814,000 in number, are instructed by 1,700 schoolmasters (of whom 300 are assistants) in 1,294 elementary schools.

The Protestant part of the population, amounting to about 389.000 persons, are taught by 790 masters (of whom 200 are assistants) in 583 schools.

The rest of the population consists principally of Jews, who fluctuate in point of number; but generally maintain 28 schools in the Grand Duchy. The total number of schools is 1,905.

In regard to the total number of children who frequent these elementary schools, two distinct calculations have been made at my request, by persons on whom I can place the fullest reliance; and the difference of the results is anything but trifling; the one giving the total number as 170,000, the other 198,000; leaving a discrepancy to the amount of 28,000. This difference I believe to have originated, 1st. In the fact of that calculation, which makes the number appear so much greater, having been made at a later period after a slight increase of population. 2dly. In the fact of their being comprised therein the children of Jewish parents—and 3dly. In no allowance having been made for the children who absent themselves from school. I am inclined to believe, however, that the rate of the children who really attend the elementary schools relative to the number of inhabitants is as 1 to 7. The rate of the schools to the population is thus 1 to 641 inhabitants, and to the total number of schools (though some are always absent) the rate is 1 school to 103 scholars. There is one school also to 3 miles 3 27ths, and more than 1 to each considerable hamlet

My Lord, this is a magnificent establishment—most magnificent, considering the extent, the degree of wealth, and the population of the land; nor are the means for supporting this establishment less worthy of notice and of admiration, although the people of Baden still feel that something remains to be done, and are anxiously striving for its accomplishment. The funds for the support of the Volkschulen proceed from three separate sources; and this arrangement, originating in the changes of times and circumstances, rather than in any uniform and synchronical plan, has been found to possess very considerable advantages, if there exist also some disadvantages.

1st. The Volkschulen, instituted, organized, and superintended by the State, from the State likewise derive that portion of the funds necessary for their support which is not supplied by other sources.

2d. Each individual parent whose child derives benefit from the institution, is called upon to contribute his part towards its maintenance.

3d. Various sources appropriated to the same purposes prior to the establishment of any general system, have, of course, been retained to diminish the burden of the State and of the parents.

From these three sources the Volkschulen derive their support. Of the first of these sources, i. e. the contribution of the State, it may be only necessary to say—as the amount varies from year to year—that by the last budget the sum required for the instruction of the people, University expenses included, was no less than three and a half per cent. upon the whole expenditure of the State, the expenses of collection and management being deducted.

The amount paid by the parents, called schulgeld, is also very difficult to ascertain, as it varies in different years; but although the sum demanded for each individual in some parishes is not always the same as in others, it is always trifling in amount. It is, however, very generally believed throughout Germany, that education, like other things, is not valued unless it be purchased, and consequently the system of schoolmoney is almost universally advocated by those who have a practical knowledge of the effects, although Nassau offers a brilliant example of the contrary system attempted with success.

In regard to the third source from which the school funds are derived in Baden, I must beg your Lordship's particular attention, as the multitude of old rights, laws, customs, foundations, and institutions, to meddle with which was dangerous, and to regulate which was difficult, rendered the introduction of any general system of education into Baden a much more complicated and arduous enterprize, than it could prove in England; and yet the enterprize has been undertaken without hesitation, and executed with complete success. The third source of which I speak comprizes the following branches:—The revenues arising from various legacies and foundations (the destination of which has been uniformly respected, the State claiming merely the regulation of the schools, not any interference with appropriated funds), that portion of the revenue (whether paid in kind or in money) arising from church and school property which the custom assigns for the support of schoolmasters and school buildings; a certain portion of the tithes which must be considered as distinct from the church and school property of which I have spoken; a yearly distribution from the parishes; and last, the customary contribution of the *Herrscheft*, or of various Lords, possessing a seigneural property in the schools upon their lands, with various rights thereunto attached, which rights have ever been held inviolate, and which have seldom, if ever, been abused.

The sum produced from all these sources is considerable, yet still insufficient to enable the state to establish a graduated scale of salary for the schoolmasters, beginning with 200 florins, or 16*l.* 1*s.* 4*d.* as the lowest, and ending with 500 florins, or 41*l.* 16*s.* 4*d.* as the highest salaries for instructors in primary schools, which plan was strongly recommended by the report of the school commission in 1831.

In regard to the higher schools, of which 29 exist, and the Universities, which are two in number, I shall not occupy your time, as the first are now undergoing a complete revision and alteration, and the latter could afford no example, though they might a warning, to Great Britain, especially in regard to the consequences of a want of scholastic discipline. Besides these, however, there exist in Baden five other excellent educational institutions, namely, a Polytechnic school, a deaf and dumb school, a blind school, and two distinct seminaries for Catholic and Protestant schoolmasters, each excellent in their system and organization, the Catholic containing about 112 scholars, the Protestant 50.

The organization of the educational establishment is extremely simple. With the Minister of the Interior rests the principal moving power, while to the clergy is committed the general superintendence. The bishop, of course, is at the head of the clerical branch of the administration, but each large district has its deacon, whose especial office it is to superintend, direct, and govern the various schools within his department.—Under him again, the immediate superintendence of the schools is confided to a committee of the parish council, presided by the clergyman of the place, whose duty it is, by constant visits and examinations, to make himself thoroughly acquainted with the state of the school, and the conduct of the schoolmaster therein, to counsel, advise, and reprove him where necessary, and in cases where the master is either obstinate in error, or firm in opposition to the opinion of the clergyman, who has no power of compulsion, the question at issue between them is brought first before the parish council, thence, if still unsettled, before the deacon, and ultimately before the grand

ducal council for public instruction. In addition to this regular organization, each large district has a certain number of inspectors, whose duty it is to hold a public examination of each primary school, at least once in the year, and to make a general report of the state of each to the Government.

The method of instruction, and the general disciplins of the school, though very strictly laid down by law, still depends greatly upon the master; and I have had opportunities of ascertaining that the moral condition of a whole parish hed been changed by the appointment of a good or bad schoolmaster, and his continued residence in the place. Were there space, some most striking instances of this fact might be given, showing the absolute necessity of what have been called Normal Schools, from the immense influence that primary schoolmasters exercise upon the moral condition of the people.

Although I have considered the educational system of Germany, more especially in a political and statisical light, yet I have not failed to visit the Volkschulen, and to make myself acquainted with some of the details of instruction. The extent of instruction, however, is very various in different schools, according to the capability of the master, and the situation of the parish. Reading, writing, arithmetic, and singing, are taught in all the schools of Baden; and a thorough knowledge of the chief doctrines of the Christian Religion is invariably communicated in all Christian schools. Under a well instructed and judicious master, however, I have seen these branches of study carried far beyond their mere first principles, and that in a small school in a bad and poor situation. He had given to his scholars a very considerable knowledge of plain trigonometry; he had made his lessons in reading a vehicle for conveying much general information, and his lessons in writing a means of imptoving the style and of exercising the thinking faculties of his pupils. Not only were the scholars thoroughly acquainted with biblical history, but most of them could point out the geographical position, and many statistical facts concerning the countries of which they spoke, and could reason clearly and rightly upon any simple proposition placed before them. This, however, is not always the case, and it is only by very strict attention to the education of the masters that such results can be hoped for.

Allow me now to call your Lordship's attention to a few facts of some importance, as bearing upon the expense which the establishment of a general system of education would draw upon England. The very best authority which I have consulted, states the gross revenues of the Protestant schoolmasters in Baden to be under 170,000 florins per annum, which, when divided amongst 790 masters, gives a salary of 215 and a fraction to each, or about £18 per annum. The average rent, or interest of money sunk in schoolhouses, is computed at 60 florins or £5, and contingent expenses may be reckoned same sum of £5. Now, my Lord, I know this computation to be too high, and that a number of deductions have not been made in the calculation, which are made in fact. However, let us make the amount still higher, and reckon the average salary of all masters at 250 florins, or £30. 18s. 2., which every one to whom I have spoken considers a high average, and we shall find that the gross expense of each school is, in round numbers, £31. Each school is supposed to educate 103 scholars, as I have shown by a previous calculation; so that we may look upon it as certain that in the Grand Duchy of Baden, 100 scholars can be furnished with good primary instruction for £31 per annum. In drawing any deductions in regard to England, we must remember two points of difference between Germany and our own country: 1st, in the price of provisions, and 2dly, in the national character. The second point of difference was called to my notice by my admirable friend Dr. Schwartz, the father of German educationists, who proved to me that from the different habits and characters of the two nations, a greater pecuniary remuneration was necessary to induce an Englishman to devote himself to the task of a primary schoolmaster, than would be sufficient for a German.

The difference of prices between England and the Grand Duchy of Baden may be taken, on an average, at the rate of 3 to 2, as some articles are cheaper and others relatively dearer; which will raise the price of education to 46l. 10s. for the education of 100 children in England; and even, after adding to the master's salary very nearly ten pounds per annum more, to hold out the greater inducement which I have mentioned, the amount may be taken at 55l. per annum for the education of 100 children. I know not what may be the expense of the schools at present erected by the benevolent exertions of private individuals; but *I am sure* that under a *general system properly organized and superintended by the Government*, the annual expense of educating one hundred children would not be greater than I have stated. Supposing, then, the population of England and Wales to amount to 14,000,000—and the same proportion of children, i. e. one in seven persons to seek the schools in our native country that do seek them in Germany—2,000,000 of persons would annually receive education at the expense of 1,100,000l. It may seem that this would be a great additional burden to an already burdened State; but I must not only contend that the burden, even at first, is more apparent than real, but also that ultimately, instead of a burden, it would prove a relief.—It can be statistically demonstrated, my Lord, that in all states where a well-organized system of of education has been instituted, poverty and its consequent claims upon the public have been diminished in such a degree as to afford the certainty of an immense diminution of that tremendous burden the poor's rates, were such an educational institution established in England. I do not say that it would extinguish them, for there must always be support provided for the old, the sick, and the incapable of the poorer classes; but it would go far to reduce the poor rates to a name. Still it may be said the present expense would be a great burden on the finances of the state; but such is not the case. One half at least, or 5s. 6d. per annum for each scholar, might well be paid (and according to the best experimential opinions should be paid) by the parents of the children taught. From the 550,000*l.* remaining, a part must be deducted for the rent and repairs of the schoolhouses, which, beyond all doubt, should be maintained by the parishes which benefit by their institution; and to meet the remaining charge I need hardly point out to your Lordship, that there are already very considerable funds appropriated for the purposes of education, which could be applied to this purpose, without any change of destination, or any infraction of rights. The sum thus demanded of the state need but be very small indeed.

WHAT O'CLOCK IS IT?—When I was a young lad, my father one day called me to him that he might teach me how to know what o'clock it was. He told me the use of the minute finger and the hour hand, and described to me the figures on the dial plate, until I was pretty perfect in my part.

No sooner was I quite master of this additional knowledge, than I set off scampering to join my companions at a game of marbles; but my father called me back again: "Stop, Humphrey," said he, "I have something more to tell you."

Back again I went, wondering what else I had got to learn, for I thought I knew all about the clock, quite as well as my father did.

"Humphrey," said he, "I have taught you to know the time of the day, I must now teach you how to find out the time of your life."

All this was strange to me, so I waited rather impatiently to hear how my father would explain it, for I wanted sadly to go to my marbles.

"The Bible," says he, "describes the years of man to be three score and ten, or four score years. Now life is very uncertain, and you may not live a single day longer; but if we divide the four score years of an old man's life into twelve parts, like the dial of a clock, it will allow almost seven years for every figure. When a boy is seven years old then it is one o'clock of his life, and this is the case with you; when you arrive at fourteen years it will be two o'clock with you; and when at twenty-one years, it will be three o'clock, should it please God thus to spare your life. In this manner you may thus know the time of your life, and looking at the clock may, perhaps, remind you of it. My great grandfather, according to his calculation, died at twelve o'clock; my grandfather at eleven, and my father at ten. At what hour you and I shall die, Humphrey, is only known to Him to whom all things are known."

Never since then have I heard the inquiry, "What o'clock it is?" nor do I think I have ever looked at the face of a clock, without being reminded of the words of my father.

I know not, my friends, what o'clock it is with you, but I know very well what time it is with myself; and that if I mean to do any thing in this world, which hitherto I have neglected, it is high time to set about it. The words of my father have given a solemnity to the dial plate of the clock, which it never would have possessed in my estimation, if these words had not been spoken. Look about you, my friends, I earnestly intreat you, and now and then ask yourself what o'clock it is with you.

We regret to hear that Miss READ, the young female in Brooklyn, whom we mentioned a few days ago as having been badly burnt by the bursting of a spirit lamp, has since died in consequence of the injury which she sustained from that cause.—[Courier.]

THE MOTHER'S INJUNCTION,

On presenting her Son with a Bible

REMEMBER, love, who gave thee this,
When other days shall come,
When she who had thy earliest kiss,
Sleeps in her narrow home;
Remember 't was a mother gave
The gift to one she 'd die to save.

That mother sought a pledge of love,
The holiest for her son;
And from the gifts of GOD above,
She chose a goodly one.
She chose, for her beloved boy,
The Source of light, and life, and joy—

And bade him keep the gift,—that, when
The parting hour would come,
They might have hope to meet again
In an eternal home.
She said his faith in that would be
Sweet incense to her memory.

And should the scoffer, in his pride,
Laugh that fond faith to scorn,
And bid him cast the pledge aside
That he from youth had borne;
She bade him pause, and ask his breast,
If he, or she, had loved him best.

A parent's blessing on her son
Goes with this holy thing;
The heart that would retain the one
Must to the other cling.
Remember! 't is no idle toy—
A mother's gift—Remember, boy!

FOLLY.—[*From Blackwood's Magazine*]

THERE is folly in all the world,
Or go we east or west,
A folly that vexes the old,
And keeps the young from rest.

The miser has folly enough,
For his soul is in sordid bags,
And the spendthrift's folly, alas!
Brings him to sin and rags.

There is folly in statesmen's schemes,
For, spite of their plotting and wit,
There's a wiser hand above
That leads them with bridle and bit.

There's folly in power and pride,
That makes full many to fall,
There's folly in maiden's love,
But that is the sweetest of all.

But of all the follies, the worst—
For it stings with constant smart,
The scorpion of the mind—
Is that of a thankless heart.

For the thankless heart is cursed,
And with blessings encompass'd grieves—
For it cannot rejoice with the hand
That gives nor yet receives.

To be thankful makes better the good:
And if Heaven should send us ill,
There is kindness in him that gives—
So let us be thankful still.

O let us be thankful in youth,
And let us be thankful in age—
And let us be thankful through life,
For there's pleasure in every stage.

Youth has its own sweet joys,
And he must be blind as a bat,
Who cannot see love's sweet smile,
And will not be thankful for that.

There are friends the dearest to cheer,
Ere half our sand is run—
And affection makes wintry days
As bright as the summer's sun.

And when from the dearest on earth
We part, let us hope 'tis given—
A boon to be thank'd for still—
To meet them again in heaven.

LA GITANILLA.—*From the Songs of "Rookwood."*

By the Guadalquivir,
Ere the sun be flown,
By that glorious river
Sits a maid alone.
Like the sunset splendour
Of that current bright,
Shone her dark eyes, tender
As its witching light:
Like the ripple flowing,
Tinged with purple sheen,
Darkly, richly, glowing,
Is her warm cheek seen.
'Tis the Gitanilla,
By the stream doth linger,
In the hope that eve
Will her lover bring her.

See, the sun is sinking!
All grows dim, and dies;
See, the waves are drinking
Glories of the skies.
Day's last lustre playeth
On that current dark;
Yet no speck betrayeth
His long-looked for bark.
'Tis the hour of meeting!
Nay,—the hour is past.
Swift the time is fleeting!
Fleeteth Hope as fast.
Still the Gitanilla
By the stream doth linger,
In the hope that night
Will her lover bring her.

To the Editor of the New York American :

SIR—The following original lines, intended to express the first warm feelings of paternity, are with diffidence offered for insertion, if deemed to possess sufficient merit to entitle them to a corner, in your journal.

TO MY FIRST-BORN.

Less fondly to the trellis cling
The tendrils of the vine,
Than sheltered 'neath a parent's wing,
That parent's heart to thine.

A new and deeper chord of feeling
Thy touch to wake had power,
Unto my soul a bliss revealing
Ne'er felt until *that* hour—

The hour when in a mother's arms,
First bent my gaze on thee,
And heightened seemed a mother's charms,
Nurturing thy infancy.

Emotions warm that brimmed my soul,
Eureka ! bade me cry ;
For I had won the latest goal
Of happiness 'neath the sky.

RASSELAS.

FOR SALE.

☞ A second hand double cylinder NAPIER PRINTING MACHINE, that will work about two thousand sheets an hour, in perfect order. It will be sold a bargain. Apply at this office. a13 d&ctf

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44. and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y , by
a12 tf D K. MINOR & J. E. CHALLIS.

RAILROAD IRON, &c.

☞ Sealed proposals will be received until the 15th day of September next, for the immediate delivery thereafter at Suffolk, Va., of 250 tons of Railroad Iron in bars from 14 to 18 feet in length—2 inches wide by half an inch thick—pierced with countersunk holes ⅞ths of an inch in diameter, 1 foot or 13 inches apart from centre to centre; and for 16 tons of Spikes 4 inches long and ⅝ths of an inch in diameter. Specimens of the latter, and drawings of the rail showing the size and shape of the hole, shape of the rail, and angle of the scarf, will accompany each bid. WALTER GWYNN, Civil Engineer.

Engineer's Office, Portsmouth & R. R. R. }
Suffolk, Va , August 18. } a30 3t

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phinehas Davis, patentee of the celebrated wire drilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER a 30

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, } *Flat Bars* in
200 do. 1¼ do. ¾ do. } lengths of 14 to 18
40 do. 1½ do. ¾ do. } feet counter sunk
800 do. 2 do. ¾ do. } holes, ends cut at
800 do. 2½ do. ¾ do. } an angle of 45 degrees with splicing plates, nails to suit.
soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2⅛, 2⅜, 2½, 3, 3½, 3¾, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, }
January 29, 1833. }

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 772, Vol 2, of Railroad Journal.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15. 1833. A29 tf RM&F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

J31 tf

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norrist. Railroad
ml 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J25 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

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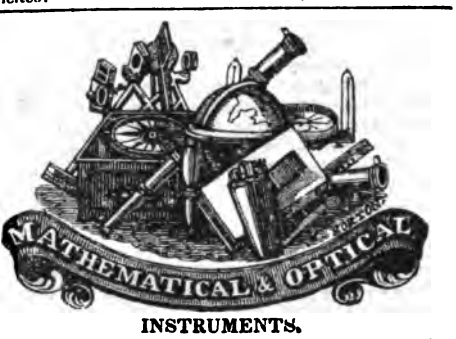
NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18



INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

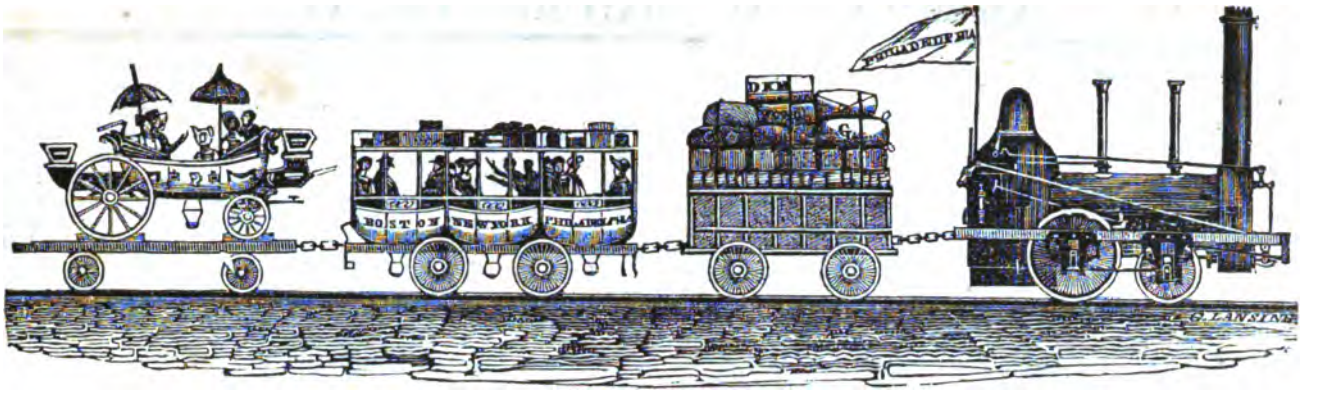
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m28



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] **SATURDAY, SEPTEMBER 6, 1834.** [VOLUME III.—No. 35.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, SEPTEMBER 6, 1834.

Internal improvements within our State, by her own resources, are in every sense more desirable than if made or aided by the United States: yet there are certainly exceptions to this. Such, for instance, are the improvement of so great a thoroughfare as the Hudson, and the connection of the great lakes, by cutting a ship canal round the falls of Niagara. These clearly fall within the province and duty of the General Government.

For the Hudson, a small appropiation of $70,000 has already been made by Congress. Captain Talcott, an accomplished officer of the United States Engineers, has, it is understood, been ordered to take charge of the work. According to the tenor of the law, the improvement, towards making which this sum was voted, is to be effected in conformity with a plan laid down in a report made some years ago by Col. Dewitt Clinton. What that precise plan is, we know not, not having the report; but from the nature of the stream itself, and of its tributaries, we apprehend great, if not insuperable, difficulties will be found, in any attempt permanently to deepen the obstructed channel. The quantities of earth, timber, &c. brought down by the spring freshes, and the rich meadows through which the river passes, will, it may be feared, constantly accumulate fresh depopites—at or near the Overslaugh. After all, perhaps, a ship canal from Troy to Hudson would be found, in the end, the cheapest, as it certainly would be an effectual, substitute for an obstructed river.

The other work which the United States must one day undertake—and they cannot perhaps undertake it too soon—is a ship canal around the Falls of Niagara. This, as every one who has seen the ground may have perceived, is easily practicable; and as, by the time it shall be completed, the free navigation of the St. Lawrence should be conceded to us by Great Britain—as a right, not as a favor—as deduced from the general principles that nation has been a party to and sustained in Europe, and not as resulting from any peculiar relations existing between that country and this—there would by that channel, and by the ship canal which this State is expected to construct from Oswego to the Hudson, be two new outlets opened to the fertile regions of the West.

Thus much of internal improvements by the agency of the general government.

This State, meanwhile, has a great work to perform, in which this city is full as much interested as that portion of the country where it is to be effected—a Railroad through the South Western tier of Counties. Facilities for this route greater than the most sanguine hopes had anticipated, have, it is said, been developed by the survey; and when it is considered how little has been done for that portion of the State, and how important it is in the active competition going on for the trade of the Western States, to obtain a communication with Lake Erie, as far South as possible, so as to be available late in the fall and early in the spring without interruption from frost, it will be admitted that the proposed Railroad through the South Western tier of Counties has strong claims upon the State for aid.

☞ See page 552.

On the Construction of Railroads.

To the Editor of the Railroad Journal:

Sir,—You know it is only a matter of course that I should read the article of "J." on the subject of a road of earth expressly for steam carriages, in your 32d number, with peculiar gratification. It is by no means certain that the subject will attract the attention of those who are most interested, and able to turn the suggestions to a good practical account. I hope it may. However, I offer you a few further observations in relation to it of a plain character. Experience must show what kind of road is best for this purpose. I observe, that at this time, (the season is dry,) the heavy stage, with its small wheels of narrow tire, and when full of passengers and baggage, (near 3 tons,) in passing by my door, if the wheels happen to go a little out of the common track, which has been beaten into dust by the horses' shoes and the wheels, they make a track or indentation that is scarcely perceptible.

The materials of this road are not gravel, but a mixture of sand and clay, such as constitutes either the upper or the second stratum of earth generally through this region. It is perfectly apparent then, that, when dry, if it were accurately graduated, and not cut up by horses' feet and narrow tires, it would be little inferior to a rail. During the time a drizzling rain is falling, it certainly is softened one eighth or one fourth of an inch, but immediately after the rain it dries and recovers its solidity, and this result would be accelerated and perfected by the passing of such wheels as "J." has suggested. From the showing of this writer and various articles which have appeared in the Journal, it is manifest that the advantage which a railroad has over a road of earth is limited to a road level, or nearly so; and that when you arrive at an ascent of one in fifty, it is even better than a railroad. Can this be so? Few railroads can be constructed without occasional ascents as great as one in fifty. But evidently, if a line of road have *one* such inclination, this, of course, limits the performance of the locomotive, for, practically, it is of no use to give it a greater load on the level portion than it can take over the ascent; and all the advantage which a railroad has over a road of earth, practically, is lost. Nay, if it should have one ascent near to that which requires additional aid, it is greatly superior, and that superiority increases rapidly as the inclination is greater. I say again, can it be so? What is, then, the necessity of railroads?

But, furthermore, the construction of a railroad is a nice affair; every part must be kept perfectly tight and in its place; only small wheels can be used; and, although for trial and exhibition a locomotive may run even 40 or 50 miles an hour, yet, practically, they do not exceed 15 or 20. Whereas, it appears to me, that by the use of large wheels, (and why may they not be made even 15 feet diameter,) a locomotive may be driven on a road of earth, ordinarily, at any velocity which the resistance of the atmosphere will admit—say 50 to 60 miles an hour. It is certain, at least, that the progress of the large wheel is not only greater for each revolution, but its motion is much more smooth and equable, and not subject to jostling or agitation. I am not at present aware of any disadvantage attending large wheels, except their gravity causing a greater indentation of the road, and greater resistance in ascending an inclination. The first, I think, would be prevented by the increased diameter and breadth of tire, and the latter compensated by the greater adhesion; and finally, engines of almost any required power could be used.

Perhaps most of the above remarks are merely repetitions of what you have published before; but if there is not some very great fallacy or mistake in all that has appeared on this subject, they ought to be repeated until noticed and tested by experiment.

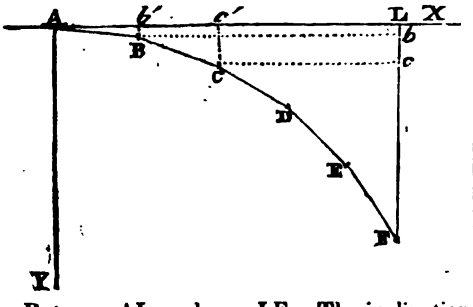
But, one word more: if roads of this description, by reason of frost, are not adapted to northern regions, they certainly are to Virginia, Kentucky, and all the southern part of our favored land, where little inconvenience is occasioned by frost.

C. O.

On the Location of Railroad Curvatures; being an Investigation of all the Principal Formulas which are required for Field Operations, in laying Curves and Tangent Lines, to pass through Given Points. By J. S. VAN DE GRAAFF. Continued from page 533. [For the American Railroad Journal.]

13. Let AB, BC, CD, &c. represent the successive chains by which a given curve ABCD, &c., may be traced from its origin at the station A, in such a manner as to touch a given right line, AX, at that station; and let EF represent the nth chain, counted from the origin at A.

Taking AX, and AY, for a system of rectangular co-ordinate axes, it is proposed to investigate formulas which will express the values of the co-ordinates AL and LF, of the station at F.



Put $x = AL$, and $y = LF$. The inclination of the first chain AB, to the axis of x, is found by Art. 10 to be $= T$; and therefore the projections of AB upon the co-ordinate axes will be, $Ab' = AB \cdot \text{Cos. } T$, and $Lb = AB \cdot \text{Sin. } T$. But as all lines are supposed to be measured in chains, it follows that the projections of AB upon the co-ordinate axes are, $Ab' = \text{Cos. } T$, and $Lb = \text{Sin. } T$. Again, by Art. 10, the inclination of the second chain BC to the axis of x is $= 3T$, and consequently the projections of BC upon the co-ordinate axes, are $b'c' = \text{Cos. } 3T$, and $bc = \text{Sin. } 3T$.

In like manner let each of the other chains be projected upon the co-ordinate axes; and then taking the sums of those projections, the following equations will obviously be the result,

$$x = \text{Cos. } T + \text{Cos. } 3T + \text{Cos. } 5T + \ldots\ldots$$
$$\text{Cos. } \{T \cdot \overline{2n-1}\}.$$
$$y = \text{Sin. } T + \text{Sin. } 3T + \text{Sin. } 5T + \ldots\ldots$$
$$\text{Sin. } \{T \cdot \overline{2n-1}\}.$$

The reason for writing the last term, in each of these two series, as the nth term, requires no explanation; and the *sum* of n terms of each series being taken agreeably to the known principles of analytical trigonometry, the following formulas will be the result,

$$x = \frac{\text{Sin. } 2nT}{2 \text{ Sin. } T}$$
$$y = \frac{\text{Sin. } ^2nT}{\text{Sin. } T}. \qquad \text{(VI.)}$$

The form in which the expressions (VI.) appear is that most convenient for logarithmic computations; and it is also a form which will be required hereafter for other purposes. But for use in the field, with a table of natural sines and cosines, the expression for the value of y may have a better form. Thus, agreeably to the principles of analytical trigonometry, $2 \text{ Sin. } ^2nT = 1 - \text{Cos. } 2nT$; and consequently the expressions (VI.) become,

$$x = \frac{\text{Sin. } 2nT}{2 \text{ Sin } T}$$
$$y = \frac{1 - \text{Cos. } 2nT}{2 \text{ Sin } T}. \qquad \text{(VII.)}$$

Such are the formulas which it was proposed to investigate. For an example in figures, let the modulus of curvature be 1°, and suppose it were required to find the values of AL and LF, corresponding with the extremity of the 40th chain. In this case, then, $2nT = 80°$; and by the table of natural sines and cosines, at the end of this volume, I find Sin. 80° = .98481, Cos. 80° = .17365, and Sin. 1° = .01745; hence,

$$x = \frac{.98481}{.03490} = 28.214 \text{ chains; and}$$

$$y = \frac{1 - .17365}{.03490} = \frac{.82635}{.0349} = 23.675 \text{ chains.}$$

If, therefore, the chain used in tracing the curve be 100 feet in length, then AL = 2821 feet, and LF = 2367 feet.

14. Let the modulus of curvature be given from which a circular arc is traced in the field with a given chain; it is then proposed to determine the radius of the arc described.

It is very obvious that when n is made variable in (VII.), the *maximum* value of x will express the required radius; but when x is a *maximum*, it follows that Sin. $2nT$ must be a maximum also, if it be supposed that Sin. T remains constant. Now, the quantity Sin. $2nT$ obtains its *maximum* value when $2nT = 90°$; in which case Sin. $2nT = 1$. Hence, denoting the radius of the described circle, *in chains*, by R, the result is,

$$R = \frac{1}{2 \text{ Sin. } T}. \qquad \text{(VIII.)}$$

The most simple formula which can possibly be obtained to express the radius of curvature may be had by means of the cosecant of the angle T. For by the principles of trigonometry, Cosec. $T = \frac{1}{\text{Sin. } T}$; and consequently (VIII.) becomes,

$$R = \frac{1}{2} \text{ Cosec. } T. \qquad \text{(IX.)}$$

To save the trouble of computation, the following table is here subjoined:

T	R	T	R	T	R
0°. 3′	572.96	1°. 3′	27.28	2°. 3′	13.98
6′	286.48	6′	26.05	6′	13.65
9′	190.99	9′	24.91	9′	13.33
12′	143.24	12′	23.88	12′	13.03
15′	114.59	15′	22.92	15′	12.74
18′	95.49	18′	22.04	18′	12.46
21′	81.85	21′	21.22	21′	12.19
24′	71.62	24′	20.47	24′	11.94
27′	63.66	27′	19.76	27′	11 70
30′	57.30	30′	19.10	30′	11.46
33′	52.09	33′	18.49	33′	11.24
36′	47.75	36′	17.91	36′	11.02
39′	44.07	39′	17.37	39′	10.81
42′	40.93	42′	16.85	42′	10.61
45′	38.20	45′	16.37	45′	10.42
48′	35.81	48′	15.92	48′	10.24
51′	33.70	51′	15.49	51′	10.06
54′	31.83	54′	15.08	54′	9.88
57′	30.16	57′	14.69	57′	9.72
1°. 0′	28.65	2°. 0′	14.33	3°. 0′	9.55

For an application of the above table to an example, suppose it be required to determine the radius corresponding to a modulus of curvature of 1°, as in the last numerical example. Looking in the column marked R, and opposite to 1° in the column marked T, I find 28.65, which is therefore the radius in chains; and if the modulus of curvature, 1°, appertains to a chain whose length is 100 feet, then the radius of the arc described will be 2865 feet. But if the modulus of curvature, 1°, has reference to a chain whose length is only 50 feet, then the curve traced will have a radius of only the half of 2865 feet.

15. It appears from (VIII.) that the radius of curvature is directly as the length of the chain, and inversely as the sine of the modulus of curvature. Hence, if the radius of curvature be given, then the length of the chain will be directly proportional to the sine of the modulus of curvature. If therefore a curve be traced from a given modulus T, and with a chain whose length is unity, and it be required to find what modulus will trace the same curve with a *chord* whose length in chains is p, let the required modulus be denoted by T′, and we have the proportion $1 : p :: \text{Sin. } T : \text{Sin. } T'$; from which is obtained the formula,

$$\text{Sin. } T' = p \times \text{Sin. } T. \qquad \text{(X.)}$$

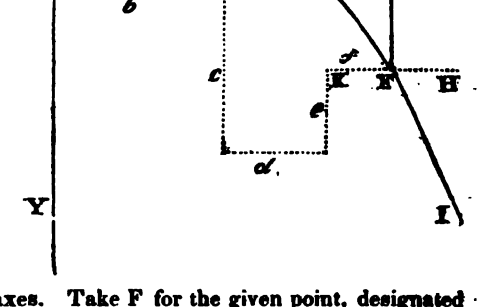
Example. Suppose the length of the chain to be 100 feet, and let it be required to determine the modulus of curvature which will trace a curve whose radius is 10743 feet, by taking chords whose lengths are 10 chains each. Here the radius of curvature is 107.43 chains; and by inspecting the table of radii, given in the last article, I find that the radius 107.43 is situated between the moduli, 0° 15′, and 0° 18′; and therefore, by proportional parts, I find the true modulus which corresponds to the radius 107.43 to be 0° 16′, and which would, consequently, trace the proposed curve with the given chain.

Hence, Sin. $T' = 10 \times \text{Sin. } 0° 16' = 10 \times .00465 = .0465$; and by the table of natural sines, I therefore find $T' = 2° 40'$, which is the modulus required.

In all cases where the angle T′ does not exceed two or three degrees, the result obtained from (X.) will not differ, by any material quantity, from that obtained agreeably to the principle given in Article 5.

16. Take a system of rectangular co-ordinate axes, having their origin at a given station in a tangent line, from which a certain required curve is to be laid, passing through a point designated by the co-ordinates x, y; the given tangent line coinciding with the axis of x. Parallel respectively to each of the co-ordinate axes, let any number of rectangular lines be traced from the origin, and terminating in the point designated for the required curve to meet; these rectangular lines being selected in any convenient manner to pass any obstacle which may happen to occur. Let the algebraic sums of each of those rectangular lines be taken, agreeably to the axis to which they are respectively parallel. Those sums will obviously give the values of the co-ordinates x, y; and from thence it is proposed to determine a formula, expressing the value of the modulus of curvature of the required curve. And it is also required; from the same data, to determine a method by means of which the instrument may be immediately directed into the true tangent at the designated point x y.

Let AX represent the given tangent line, A the given origin, and AX, AY, the co-ordinate



axes. Take F for the given point, designated by the co-ordinates $AL = x$, and $LF = y$; and let the lines marked with the small letters, a, b, c, d, &c. denote the rectangular lines, originating at A, and terminating at F, and traced in any arbitrary manner parallel respectively to each co-ordinate axis. The algebraic sums of those lines give

$$x = b + d + f$$
$$y = a + c - e.$$

It will in all cases be more convenient to determine the values of x and y, agreeably to the method here proposed, than to trace the lines AL and LF in a direct manner, even if the latter were always practicable. Very often, however, the three, a, b, c, will be sufficient.

The values of the co-ordinates x, y, having now been determined, the next object is to find the necessary modulus of curvature which will trace a curve from the origin at A, passing the

point F. For this purpose let each of the expressions (VII.) be squared,* and let the last of the two be divided by the sum of the squares; the result is,

$$\text{Sin. T} = \frac{y}{x^2 + y^2}. \qquad \text{(XI.)}$$

The formula thus obtained is remarkably simple, and convenient for use; and it may perhaps be well to observe, that the *safest* method of recording the lines *a*, *b*, *c*, &c., in the field, will be to take on a piece of paper the form $\left\{\begin{matrix} x = \\ y = \end{matrix}\right\}$, and then record each line in its proper equation, and with its proper *sign*, immediately as their values are determined. Example: A system of rectangular lines having been traced to a designated point, let the resulting equations be $\left\{\begin{matrix} x = 20 - 2 + 4 \\ y = \ 8 + 3 + 1. \end{matrix}\right.$ In this case, then, $x = 22$ chains, and $y = 12$ chains, and $\text{Sin. T} = \frac{12}{484+144} = \frac{12}{628} = .01911$; and by the table of natural sines I therefore find, $\text{T} = 1° 5\frac{1}{2}'$; which modulus will trace the curve required.

But if the curve AF, as first determined by means of (XI.) should appear to be too abrupt, or if from any other cause it should be considered advisable to commence the curve from a different origin upon the tangent line AX, as for instance at B or C, and still retain the same point F, then the necessary modulus of curvature from the new origin is easily obtained from the former measurements. For taking $\propto$ to denote the distance AB or AC, the new co-ordinates will obviously be $x \pm \propto$, and y; and consequently upon the same principle as in (XI.), the required formula for the new modulus is,

$$\text{Sin. T}' = \frac{y}{x \pm \propto|^2 + y^2}. \qquad \text{(XII.)}$$

If, for example, the curve last considered had been commenced 3 chains *back* upon the tangent line AX, as at the point B, then the co-ordinates would have been $x + \propto = 25$, and $y = 12$; and, therefore, $\text{Sin. T}' = \frac{12}{625 + 144} = .01561$; or, $\text{T}' = 0° 53\frac{1}{2}'$; which is the modulus required to trace a curve from the new origin at B, through the point F.

The direction of the tangent will now be considered. It is very evident that the two curves considered in the two last examples will have very different directions in passing the point F; and it is a matter of considerable importance in the field, after the rectangular lines *a*, *b*, *c*, &c., have been traced to any proposed point, to be able to examine, by the direction of the instrument, what the direction of the curve would be passing from the origin through that given point. Indeed, in different situations, a curve cannot be selected without such a datum; and if the rectangular lines, *a*, *b*, *c*, &c. were not sufficient to furnish that datum with facility, a curve would have to be actually laid upon the ground in order to judge of its fitness, even if we knew a point F through which it would pass. A formula for this purpose is however easily obtained from the rectangular lines *a*, *b*, *c*, &c. Let FI represent a tangent from the point F; there would then, evidently, be no difficulty in directing the instrument, when placed at F, into the position FI, if we knew the inclination of that tangent to the original tangent AX, at the origin. For supposing KF to be the last rectangular line traced, it will, of course, be either parallel to AX, or perpendicular to it; and in *either case* it furnishes the means of directing the instrument into the line FH, parallel to the original tangent at the origin. We have then only to deflect the angle HFI, equal to the inclination of the two tangents, when that inclination is known, and the direction of the curve at F may then be seen at once, from the position of the instrument, without that delay which would be occasioned by actually tracing a curve upon the ground, which would ultimately have to be relaid.

The result therefore is, that a formula must be investigated, expressing the inclination of the two tangents, in terms of the given co-ordinates x, y. Take D to denote the inclination required; then by (IV.), $\text{D} = 2\text{nT}$; and therefore by (VII.), $x = \frac{\text{Sin. D}}{2\,\text{Sin. T}'}$, and, $y = \frac{1 - \text{Cos. D}}{2\,\text{Sin. T}}$.

Hence $\frac{\text{Sin. D}}{x} = \frac{1 - \text{Cos. D}}{y}$; or, $\frac{\text{Sin. D}}{1 - \text{Cos. D}} = \frac{x}{y}$.

Now, substituting for $\frac{\text{Sin. D}}{1 - \text{Cos. D}}$, its value Cot. $\frac{1}{2}$D, agreeably to the principles of trigonometry, the following formula is the result,

$$\text{Cot. } \tfrac{1}{2}\text{D} = \frac{x}{y}. \qquad \text{(XIII.)}$$

Example 1. Take the same curve which was proposed as an example for (XI.) In this case, then, the co-ordinates are $x = 22$ chains, and $y = 12$ chains; and, therefore, Cot. $\frac{1}{2}\text{D} = \frac{22}{12} = 1.83333$; or, by the table of natural cotangents, $\frac{1}{2}\text{D} = 28° 36\frac{1}{2}'$; or, $\text{D} = 57° 13'$. Hence deflect the angle $\text{HFI} = 57° 13'$, and the instrument will then indicate the true direction which the proposed curve would have in passing the point F, if traced from the origin at A, by means of the modulus of curvature before determined.

Example 2. Let the direction of the curve which was proposed as an example for (XII.) be required.

Here the co-ordinates are $x + \propto = 25$, and $y = 12$; and, therefore, Cot. $\frac{1}{2}\text{D} = \frac{25}{12} = 2.08333$. Hence, $\frac{1}{2}\text{D} = 25° 38\frac{1}{2}'$, or, $\text{D} = 51° 17'$; and consequently, in this case, deflect the angle $\text{HFI} = 51° 17'$, to obtain the direction required. This curve would therefore intersect the former, at the point F, with an angle of $5° 56'$.

In all cases where both of the angles D and T have to be found, the most convenient method will be to determine the value of D by means of (XIII.), and then compute the value of T from that of D. For by a reference to (IV.) and (VII.), the following theorem will be easily deduced,

$$\text{Sin. T} = \frac{\text{Sin. D}}{2x}. \qquad \text{(XIV.)}$$

17. It is frequently necessary that several points should be designated, through which a curve is required to pass, by means of a change of curvature at each of those points. To illustrate this case, and to show the method of operation which ought to be pursued under such circumstances, take AX, (see fig. last art.,) for the primitive tangent line, and AX, AY, for primitive co-ordinate axes, whose origin is the commencement of the required curve. Trace, parallel to those axes, a system of rectangular lines given by the equations

$$\left\{\begin{matrix} x = a + b + c + \text{&c.} \\ y = d + e + f + \text{&c.} \end{matrix}\right\},$$

and terminating at the *first designated point*. Let the instrument be then placed at that point, and directed into tangent, agreeably to the method explained very fully in the last article. Take this second tangent as the axis of x, for a new system of rectangular co-ordinate axes; and parallel to these new axes, trace a second system of rectangular lines, given by the equations $\left\{\begin{matrix} x = a' + b' + c' + \text{&c.} \\ y = d' + e' + f' + \text{&c.} \end{matrix}\right\}$, and terminating at the *second designated point*. Let the instrument be now placed at this second point, and again directed into the proper tangent, by the same means as before. Take this third tangent as the axis of x, for a third system of rectangular co-ordinate axes; and parallel to this second new system of axes, trace a third system of rectangular lines, given by the equations $\left\{\begin{matrix} x = a'' + b'' + c'' + \text{&c.} \\ y = d'' + e'' + f'' + \text{&c.} \end{matrix}\right\}$, and terminating at the *third designated point*. Continue this obvious order of proceeding until all equations $\left\{\begin{matrix} x = \\ y = \end{matrix}\right\}$ have been obtained for *all the designated points*; and then by means of those equations, and (XIV.), compute all the moduli of curvatures. Returning now with the instrument to the primitive origin at A, let each curve be traced from its proper modulus of curvature, agreeably to the principles explained in Art. 9; and the line will be found to pass through all the designated points.

If proper care be observed in chaining the different systems of rectangular lines by means of which the equations $\left\{\begin{matrix} x = \\ y = \end{matrix}\right\}$ have been obtained, there can be no disappointment in the result; and consequently, if the designated points have been judiciously selected, there will very seldom be a necessity of tracing the same part of a line *the second time*. And thus the method of co-ordinate axes, in the hands of an individual to whom that term is familiar, is susceptible of being made one of the most important facilities in the field, as will be further illustrated in subsequent articles.

In tracing the various systems of rectangular lines through the different points which may be designated for a curve, there is a principle of practical convenience which must be here mentioned. I mean the principle of designating such points, for a change of curvature, as will cause each section of the whole curve, between the designated points, to be composed of an *integer number of chains*, when those curves come to be ultimately traced, after their respective moduli of curvatures have been ascertained by the methods which have been already explained. It is indeed necessary, in every case, except where the roadway is perfectly horizontal, to know the length of each of those separate curves, in order to select the designated point judiciously with respect to the *grade*; and this datum must therefore always accompany the levels. When a system of those rectangular lines have been traced to any given point, and the corresponding equations $\left\{\begin{matrix} x = \\ y = \end{matrix}\right\}$ have been thus obtained, the distance from the origin to that given point, in a right line, will obviously be truly expressed by $\sqrt{x^2 + y^2}$; which is a formula rendered very convenient for use, by means of the table of squares and square roots of numbers, subjoined to this volume. And this quantity may be frequently taken as the length of the intervening curve, by which to compute what the *grade* would be at that given point, and will always furnish an easy method of obtaining the approximate distance necessary in making a proper selection for the *position* of a line as far as the *levels have an influence*. The next object then must be, finally, to designate such a point, as near the point fixed by the levels as a desirable curvature will permit, and which will produce a curve, from the origin, containing an *integer* number of chains; but as this last condition is only for convenience in subsequently tracing the curve, it must be done without injury to the line, which is in fact always practicable.

Suppose the first system of rectangular lines to be *terminated* at the first point selected from the nature of the ground. Let $\left\{\begin{matrix} \text{X} = a + b + c \\ \text{Y} = d + e + f \end{matrix}\right\}$ be the resulting equations, and compute the value of T, and the value of a certain angle D″, from the following formulas,

$$\text{Cot. } \tfrac{1}{2}\text{D}'' = \frac{\text{X}}{\text{Y}}$$

$$\text{Sin. T} = \frac{\text{Sin. D}''}{2\text{X}}. \qquad \text{(XV.)}$$

Having now obtained the values of D″ and T, let a certain quantity, N, be found from the following expression,

$$\text{N} = \frac{\text{D}''}{2\text{T}}, \qquad \text{(XVI.)}$$

If, then, N be an integer number, it will express the number of chains in a curve passing from the origin to the point designated by the

* See note, Art. 20.

equations $\left\{\begin{array}{l} X=a+b+c \\ Y=d+e+f \end{array}\right\}$, and the angle D″ will then give the inclination of the new tangent at that point, agreeably to (XIII.); and T will express the modulus of curvature as appears from (XIV.). But if N is not an integer number, take n the *nearest integer number to it*, and retaining the value of T, compute the corresponding *new co-ordinates* x, y, by means of (VII.)

Finally, let two other rectangular lines $h=x-X$, and $k=y-Y$, be traced from the point producing the equations $\left\{\begin{array}{l} X=a+b+c \\ Y=d+e+f \end{array}\right\}$, and a new point $\left\{\begin{array}{l} x=a+b+c+h \\ y=d+e+f+k \end{array}\right\}$ will be thus obtained, *to which* a curve being traced from the origin, by means of the modulus of curvature T, it will contain the integer number of chains denoted by n.

[*To be continued.*]

In Massachusetts a steam waggon to run on common roads has been invented. Several trials have proved its efficacy. They intend to endeavor to make it pack and unpack all its packages, and keep its own account of freight.

The contracts for the Cumberland Railroad have been taken up, and the workmen have commenced operations.

Good Business.—The number of passengers conveyed on the Worcester Railroad, which is completed only to Needham, during the month of August, was 13,664, and the amount received from them, $4705 66!

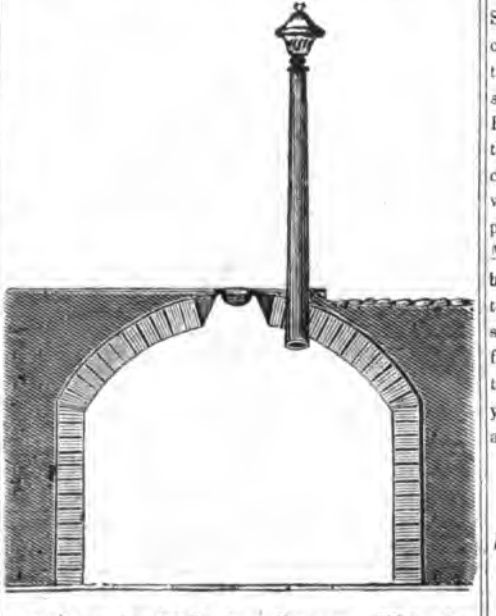
The Rochester Democrat contains the following paragraph:

Erie Canal Navigation Suspended!!—Among the strange occurrences of the day, we have to notice on Wednesday for the first time, since its completion, a total suspension of business on the Canal at this place. Nor is the suspension of navigation more to be deprecated than the evil of low, and impure water at this season of the year is to be dreaded. And when we look to the causes that have produced this state of things, we are the more surprised that our citizens submit to it as patiently as they do. We assert without fear of contradiction, that there exists no good cause, at this time, why boats should be aground, and that too for a number of days together. And this assertion is backed up by men whose experience is not to be brought into question, that to-day, and for the last two months, since a deficiency in the canal has been felt, there has been no good reason why we should not have full banks, and business going on as in years past. Years too, when greater droughts have prevailed than at this time, there was no difficulty experienced in feeding the canal at this place from lake Erie, and we again assert, there is no reason why it cannot now be done.

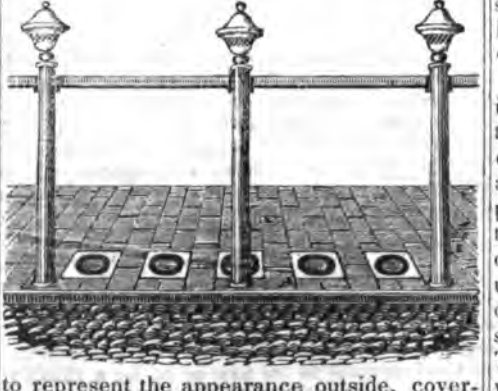
The Baltic Sea.—A paragraph lately published in the London papers from the St. Petersburgh Commercial Gazette, mentions, in confirmation of the opinion long entertained that the waters of the Baltic are subsiding, that the water in the port of that city has become considerably lower within the course of the last twenty years. Many facts are quoted in confirmation of the same opinion. It is believed that 2500 years ago Sweden and Norway were a complete Island.—Many towns on the shores in this sea which were anciently ports for shipping, are now some miles from the sea. The port of Lodisa is now four miles from the sea, and that of Westerwich two miles.—Torneo was once visited by large vessels, it is now in the middle of the peninsula. Many islands which were formerly distinct are now joined together, and others have been united with the continent. Some writers have argued that in 2000 years the Baltic will entirely disappear, and that for want of navigation the inhabitants of the shores will be compelled to resort to railroads for maintaining the commerce with distant countries.—[Boston Daily Advertiser.]

There is now making at the steam engine boiler manufactory of Mr. John Harrison, near St. Mary's bridge, in this town, perhaps the largest vessel that ever was put together in this kingdom, of wrought iron. The dimensions are as follows—Diameter, 47 feet; depth, 20 feet 3 inches; weight, between 50 and 60 tons. It will contain 218,947 imperial gallons, or 980 tons of water, which will be a pressure on the bottom of 88lbs. on the square inch.—[Derby Mercury.]

ROCKWELL'S PATENT VAULT LIGHT.—Every citizen is aware that the common vault light, or grating, which may be seen on our sidewalks at every few steps, are not only unsightly to the eye, but often positively dangerous. Very frequently they are found loose, often broken, with a bar or two out, and in winter so slippery as to render it hazardous to step upon them. Independent of these considerations, by their openness to permit rain, snow, and dirt, to pass into the vault, and render them wet, cold, and filthy, the advantages of Rockwell's Patent Light are many. There is nothing unsightly in their appearance; but, on the contrary, they are ornamental,—are made to set secure in stone, and immoveable, except when it is necessary to remove them. The passenger may put his foot on them with perfect security; and whilst they keep the vault dry, and permit ventilation to go on, possess, in addition, this advantage: they furnish, by means of the glass in the centre, light to enter, and from its convex shape, to radiate on all sides, thus giving light to the vault. Fig. 1 shows the vault, with the light, and a hollow



post through which air will pass. This pipe can be stopped up in winter if necessary, or converted into a chimney. Fig. 2 is intended



to represent the appearance outside, covering a space of 25 feet in the street, with hollow cast iron awning posts, and vault lights made perfectly tight.

Mr. Rockwell, the inventor, has also made these vault lights without ventilation holes, which are admirably adapted for vegetable vaults, where light only is required, thus excluding all cold and wet, but serving as windows to light these hitherto dark apartments.

The durability of this light, compared with the common vault covering, will be found to bear no comparison with the difference in price, which is little more than the most common in use, independent of its superior qualities.

Persons about to build, or those who would wish to improve their vaults, may see this simple, yet beautiful and economical improvement, in front of the Exchange, where two of them have been placed over vaults,—in front of the New-York Gazette,—or at the store of the proprietor, Broadway, near John street.—[Mechanics' Magazine.]

Report of the Managers of the Franklin Institute of the State of Pennsylvania for the Promotion of the Mechanic Arts, in relation to Weights and Measures. Presented in compliance with a Resolution of the House of Representatives. [From the Journal of the Franklin Institute.]

To the Hon. JAMES FINDLAY, Secretary of the Commonwealth of Pennsylvania.

The Managers of the Franklin Institute of the State of Pennsylvania, for the promotion of the Mechanic Arts, respectfully present to the Secretary of the Commonwealth their report in relation to the subject referred to them by the direction of the House of Representatives. At the stated meeting of the Managers next subsequent to the receipt of the communication of the Secretary of the Commonwealth, dated May 29th, 1833, a committee was appointed to consider the subject, and to report to the Managers of the Institute. Their report, which has been unanimously adopted, is now respectfully submitted. It is believed that no more time has been consumed by the committee than was required by a careful investigation of the subject intrusted to them, and the Managers hope that the delay of this report beyond the time of meeting of the Legislature will be attributed to the necessity of the case.

ALEXANDER FERGUSON, Chairman.
WM. HAMILTON, Actuary.

Report in relation to Weights and Measures in the Commonwealth of Pennsylvania. Adopted by the Managers of the Franklin Institute, January 25, 1834.

The Committee of the Franklin Institute, appointed by the Board of Managers to consider the subject of weights and measures, referred to them by direction of the House of Representatives of the Commonwealth, respectfully report:

That since the date of their appointment, in June last, they have given to the subject the attention which its importance so well deserved. In order to have before them, in a condensed form, the facts relating to the practical bearing as well as to the theory of the matters of inquiry, the Committee requested from three of its members reports upon the systems of weights and measures, of England, and of France, and upon the state of the question in our own country. The reports contained in the appendix, herewith presented, resulted from this request. In the first of these is given a description of the French metrical system, and of the scientific operations required in its establish-

ment; in the second, a brief history of the weights and measures of England, with the method of connecting the recent and reformed system with a scientific basis; and in the third, an abstract of the reports upon weights and measures made to the Congress of the United States, and to the State Legislatures of Pennsylvania and New-York. An examination of these reports will show from how many points our subject has been viewed, and in what varied lights, and how little novelty can be expected in any view which at this time may be submitted. This circumstance will perhaps be found of important practical benefit, for a desire to present what is novel may have led to much of the inapplicable speculative inquiry with which the subject is encumbered.

The Committee think that they may assume that the House of Representatives of the Commonwealth, in referring the bill relating "to weights and measures and to admeasurement" to the Managers of the Franklin Institute, did not intend to confine their report exclusively to the consideration of that bill, but rather that it should form the basis of their investigations.

With this view of their duties, the Committee would propose to consider the subject under two suppositions: the first, that the Legislature of Pennsylvania shall determine, or have determined, to legislate in relation to a system of weights and measures for this Commonwealth, independently of other states; secondly, that a combined action by the several states, or by the Congress of the United States, may be admissible.

In legislating upon any matter which in its varied ramifications affects almost every business in which men engage, there cannot be too much caution. Usages have grown up in all trades, which have become a part of those trades which require a portion of an apprenticeship to learn, in contravening or changing which, by law, the interests of the citizen, if not his rights, are infringed. Hence the necessity of entering thoroughly into details which can only be supplied by the members of each art, or trade, from their own knowledge of their own wants, and which should properly vary with the progress of that art; or of leaving such details to adjust themselves, upon the basis of careful legislation upon general principles.

A system of weights and measures, which aims at furnishing such general principles, should establish the standard of linear measure, and fix the relation of the standard of capacity measures to that of the linear measure; should provide for procuring, preserving, and distributing positive standards of measure and of wieghts, and should refer the entire system to natural invariable standards, by which its permanence might be secured. It should be accompanied by a supplementary law less fixed in its character, which should state the principal denominations of the several measures and of the weights, and their relation to each other and to the standards.

The system may contemplate an entire change in the standards and in the denominations; or it may aim at providing standards in conformity with those in most common use, and by which the accuracy of existing standards may be at all times tested, and at improving existing denominations.

The case of an entire change is presented by the French metrical system, where throwing aside, in their measures, the denominations of foot and toise, they adopted a new denomination, the metre corresponding to a new length, the ten millionth part of a quadrant of a terrestrial meridian. The present English system is in part of the second kind; leaving to usage to establish the denominations, it aims at providing positive standards of authority, and of perpetuating them by their comparison with invariable standards furnished by nature. The inability of the first system to contend against usage, is to be found in the establishment by law in France of a metrical foot, one-third of a metre in length, of a metrical pound half the kilogramme of the new system in weight. Had one currency been in use throughout our infant country when the present currency was established, it is not impossible that its beautiful simplicity might, even at this day, have existed only in theory.

Sound policy, nevertheless, requires that, from time to time, such changes should be introduced in existing denominations as will tend to simplify the system, and to bring it gradually nearer to perfection; but even in these, perhaps, the law should follow indications of change dictated by convenience, rather than undertake to lead them.

A system of weights and measures and of denominations based upon that in common use in our country, would include the following particulars: first, a reference to some existing measure as the standard of length; as, for example, to a certain yard measure in the possession of the State, which should be declared at a certain temperature to be the linear unit. The multiple and submultiple denominations of this standard should be declared as lines or nails, inches, feet, perches, &c. Second, a unit measure of capacity, as, for instance, the bushel, should be defined in reference to the linear standard. This unit might be taken for both dry and liquid measures, or it might be deemed advisable to conform to usage by providing different units for liquid and for dry measure. In regard to the denominations an obvious improvement might be made by avoiding the use of the same name for things essentially different, as a gallon for different capacities according to its use in dry or in liquid measure, a change which would not fail to be sanctioned by general adoption. Third, a reference to a positive standard for weight, as a certain pound in the possession of the State. The multiple and submultiple denominations to be regulated. And here a question presents itself, whether it may be possible to have but one unit of weight denominated the pound, rejecting the troy or avoirdupois pound, as may be thought advisable. In choosing between them, the difficulty presents itself that the former pound has been legalised by Congress in our coinage, by referring to the standard troy pound in possession of the mint, while the latter is the pound generally used in commerce. It is probable that this innovation could not be made with advantage at present. In regard to the denominations a similar difficulty is presented in the ton, which is either 2,240 or 2,000 lbs. according to locality, or to usage, or to agreement. To the adoption of the ton of 2,000 lbs. technically called the short ton, there does not seem to be any insuperable objections. It is so convenient in practice that it has been legalized by several of the States, and is used in many cases in our own Commonwealth.

In providing for the distribution of positive standards throughout the State, the nature of the material of which they shall be made will be an important item. For the material of their positive standards of length, the French adopted iron, the English brass; for those of weight, the former employed platinum for the original standard, and brass for the copies; the latter brass for both. In case of the adoption of either metal, it would be important to inquire by experiment more carefully than has been hitherto done, into their relative expansions under different circumstances of manufacture. This would not bear merely upon the theoretical perfection of the standards, but upon that in practice, for two standards which were alike when made in winter, might, if compared in summer, differ so much that one would be thought to require the expense of alteration. If the yard stick of the merchant will not be changed by this difference, it will become sensible in the chain of the surveyor, and the landholder will find his limits affected by it.

Next, the positive standards thus provided should be referred to some natural invariable standard. The necessity for this reference is so frequently denied that the object would seem not always to be perceived. Positive standards are liable to change by accident and by use. Let us suppose a case in which a standard of measure belonging to the Commonwealth, and carefully deposited in one of its offices, receives injury in taking it down for examination or in course of a comparison of another measure with it. The county standards are resorted to, for the purpose of recovering the original length of the standard, but if not well preserved, or if frequently used, they disagree. It is in such a case, and the probabilities are strong of the occurrence at some time of similar cases, that the natural invariable standard becomes the means of deciding between the varying measures. The length of a pendulum vibrating seconds or the arc of a meridian is measured by using either of the measures; the length thus found is the same number of inches and parts of an inch with that of the pendulum or of the arc, which was previously fixed with reference to the original standard, or is so many parts of an inch too long, or too short, and the length of the original measure is known by reference to that which has been tested. But it is not necessary to resort to any supposition of accident which may occur to the positive standard; the experience of Eugland has shown that, under ordinary care, changes will be found from century to century, and that measures which are at one time easily known and recognized to be the standards, may at some other time be the subjects of antiquarian research. Part of the reproach under which the scientific operations here referred to lie, namely, that they are liable to corrections as science progresses, is due to the fact that experimenters have not been satisfied with stating the results of experiment, but have endeavored to deduce from theory the relation between those results and others in other circumstances, using for this purpose the data furnished by the science of the day. Thus they have not been satisfied with stating that the pendulum vibrating seconds, and in a circular arc, measured with a means described, at a given temperature and pressure, and at a particular spot, was a certain number of inches of the standard; but they have undertaken from their experi-

ment to conclude what the length would be in a vacuum, in a small arc, at an assumed temperature and pressure, at the level of the sea, and in a particular latitude, and these before the weight of the air, the effect of its buoyancy, &c. were well known and established, even according to the knowledge of the day.

The Committee, in the discharge of the duty committed to them by the Managers, proceed to submit their examination of the bill referred by the House of Representatives; in this they will be as brief as is permitted by the fact that many of the provisions of it are at this time the law of the State. If the Committee are correct in the ideas which they have already expressed in relation to the requisite enactments for regulating weights and measures, the objection to the bill, on the score of its leaving general principles to enter partially into details, is a sound one; this remark has reference more particularly to that part of the bill which relates to admeasurement, in relation to which it will be necessary for the Committee to go into minutiæ, in order to be intelligible.

The twenty-seventh and twenty-eighth sections establish a certain ratio between the weight of different commodities, and the measured bushel, in regard to which, as far as the usage of this portion of our State can be ascertained, four of the commodities mentioned are not bought and sold by weight; and of the two which are, one is always purchased at a different weight per bushel from that assigned in the sections, the brewers of Philadelphia always buying their barley at the rate of forty-eight pounds to the bushel. Salt of all descriptions pays duty at the rate of fifty-six pounds to the bushel, and is in all cases sold by measure. The usage will probably be found to be different in other parts of the State, for where materials are concerned which have weights in proportion to their bulk, varying with soils and seasons, or, as in the last case, with the moisture of the air, equitable dealing could not fail to produce such differences.

In regard to the scale of anthracite coal, provided for by section twenty-nine, no mention being made of the bituminous coal, usage has established its scale by weight, and no necessity exists for providing a ratio between measure and weight.

The measure of an acre of land, of a cord of wood, or bark, the contents of a hogshead of cider, each is made the special subject of a section, while other superficial measures, the measurement of lumber, &c., the contents of casks of beer, ale, whiskey, &c. &c., are left, as indeed all should be left, to the regulation of inspection laws, or to usage.

Section tenth is liable to similar objections, as providing for a peculiar form to be given to the bushel for measuring lime, which is one only of the many commodities sold by the heaped bushel. A provision for a legal standard bushel would regulate all such cases. The law provides in section seventh for both a wine and a beer gallon, a provision which the committee consider particularly objectionable, the inconvenience of two different measures having the same name, is obvious, and practice confirms the conclusion: the beer gallon being no longer, as far as the committee can ascertain, in use, at least in the city of Philadelphia.

The Committee would further remark, that they have not been able to find why the regulator of the weights and measures of the city of Philadelphia should not be subjected to the same enactments with other regulators or inspectors: the want of inspection laws to regulate the duties and fees of the office seems to be felt by the citizen who now fills, with industry and zeal, the office of regulator of this city.

Leaving these details, the Committee would urge a general objection to the portion of the bill referring to the positive standard for weights and measures. It is that, after providing for procuring those standards and distributing them, by means which would require an expenditure not at all, however, beyond the necessity of the case, it renders nugatory the whole of the work done, by providing that whenever the United States' standards shall be declared, those of the State shall conform thereto. The existence of a system which has cost the State much time and labor is thereby made contingent upon their obtaining standards which *may* be those adopted by Congress at some future day, or upon the want of action of the United States upon the matter. The difficulty of a change after a complete distribution of standards would necessarily be much greater than at a time when the want of some standard was generally admitted.

With great deference to the body who are to consider the subject, the Committee have prepared an altered draught of a bill in conformity with the views which they have submitted in the foregoing, and which they respectfully submit for examination, under the supposition that legislation is, at this time, deemed advisable. The bill containing the general provisions for a system of weights and measures is accompanied by a supplementary one establishing the legal denominations. In regard to the manner of this appointment of regulators or sealers of weights and measures, to the securities to be required for the faithful performance of their duties, to the penalties for negligence, and to the penalties for infringement of the provisions of the bill, the Committee do not consider it within their province to offer any remarks, further than that they are of opinion that they may conveniently form a separate subject of legislation, and should not be incorporated with the general enactments.

The Committee will next proceed to a more grateful portion of their duty than that which required the criticism of the bill referred to them; namely, to consider the case in which action by the Congress of the United States may be deemed by the Legislature to be advisable. Next to the inconveniences which result from a varying standard of measure and weight in the same community or neighborhood, may be ranked those produced by a want of uniformity in the standards of different contiguous States; for it must happen, in a republic organized as is our own, that the different parts of the same State have less frequent communication requiring the use of such standards, than the adjacent parts of the different Commonwealths. So impressed are the Committee with this view, that they would express it as their decided opinion that the most imperfect system of weights and measures which has ever been framed, would, if applied in all the States of our Union, be preferable to the most perfect system which should be adopted by any one Commonwealth singly. The Constitution having delegated to Congress the power "to fix the standard of weights and measures," there seems to be no doubt but that that body have authority to legislate upon such a system as has been offered for the consideration of the House of Representatives of this Commonwealth, in which the object is rather to fix standards so that they shall not be liable to change for the future, than to make innovations in existing legal standards. Indeed, in most of the laws of more recent origin adopted by several States, there is a distinct provision, that when Congress shall furnish a system of weights and measures for the United States, the temporary State standards shall be made to conform to the national standard. The exceeding importance of uniformity is thus distinctly set forth, from quarters of the highest authority in the different parts of our extended republic.

In the multitude of objects to which the national legislation must be directed, it is hardly to be wondered at, that no action should have taken place upon this one. If the wants of the States, or any of them, should be expressed, Congress could hardly fail to take up a subject upon which so much unanimity of view might be expected. Frequent consideration has been given by that body to providing a system of weights and measures, even without the stimulus just referred to, as appears by a reference to the analysis of their proceedings accompanying this report. So far as the collection of the revenue is concerned, the object of uniformity in the standards is near its accomplishment, under directions, issued from the Treasury Department of the United States, for the distribution of standards to the custom-houses; and thus one motive which might have induced the action of Congress is removed, and the necessity for exertion on the part of the States, to secure so desirable an object, is increased. That standards issued to the custom-houses can be substituted for national standards, even though legalized in the collection of the revenue, by an act of Congress, is obviously impossible: unrecognized by the laws of the States which contain no provisions deferring to such standards; not placed at all in some of the States, and but sparingly distributed in any, they could not, even by usage, and in violation of the State laws, become standards. They would tend merely to increase the diversity of standards, and unless conforming to those of the State in which they were introduced, would cause duties to be paid on commodities by one measure or weight which were sold by a different standard. The Committee would therefore most respectfully request the Managers of the Franklin Institute, to urge upon the House of Representatives, of this Commonwealth, to call the attention of Congress, through our Senators and Representatives, to the necessity of fixing the standard of weights and measures throughout the United States; and further to suggest that the co-operation of the Legislatures of other States be obtained by executive communication.

Your Committee feel satisfied that the House of Representatives of this Commonwealth may lay the subject now under consideration before Congress in a form so conveniently adapted to their legislation upon it, that a speedy action will be ensured. But should this action be delayed for two or three years, the inconvenience of action under existing laws, for such a period, would hardly counterbalance the probability of benefit to

be derived from legislation by Congress. If such just hopes should be disappointed, the people of this Commonwealth would then confidently look to the care of their legislature to furnish them with standards so essential to the dealings of all classes of the community.

COMMITTEE.

Alex. Dallas Bache,
S. V. Merrick,
William. H. Keating,
Rufus Tyler,
M. W. Baldwin,
Benjamin Say,
Asa Spencer,
Abraham Miller,
R. M. Patterson, M. D.
Sears C. Walker,
Benjamin Stancliff,
Thos. M'Euen, M. D.
Edmund Draper,
David H. Mason,
Benjamin Reeves,
Thos. P. Jones, M. D.
Frederick Fraley,
Samuel Moore, M. D.
Samuel Haines.

—

An Act to fix the Standards of Measures and Weights in the Commonwealth of Penasylvania.

Section 1.—Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennyslvania, in General Assembly met, and it is hereby enacted by the authority of the same: That the standard unit of all measures of length shall be the "yard," to conform to that in use in this Commonwealth, at the date of the Declaration of Independence, the positive standard to be obtained as hereinafter described; and that one-third of said yard shall be one foot, and one-twelfth of said foot shall be one inch.

Section 2.—And be it further enacted by the authority aforesaid, That the standard of liquid measure shall be the gallon, to contain two hundred and thirty-one cubic inches of the standard aforesaid, and no more. And that the standard of dry measure shall be the bushel, to contain two thousand one hundred and fifty cubic inches and forty-two hundredths of a cubic inch of the standard aforesaid, and no more.

Section 3.—And be it further enacted by the authority aforesaid, That the standard of weight shall be a pound, to be computed upon the troy pound of the mint of the United States, referred to in the act of Congress, of 19th May, 1828, to wit—the troy pound of this Commonwealth shall be equal to the troy pound of the mint aforesaid; and the avoirdupois pound of this Commonwealth shall be greater than the troy pound aforesaid, in the proportion of seven thousand to five thousand seven hundred and sixty.

Section 4.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Governor of this Commonwealth to procure, within — years from the date of the passage of this act, a standard yard, to constitute the positive standard of length in this Commonwealth; said standard to be equal in length, at the temperature of melting ice, to the distance between the eleventh and forty-seventh inches on a certain brass scale of eighty-two inches in length, procured for the survey of the coast of the United States, and now deposited in the war department. The material of said standard to be brass, and the divisions upon it to be inches and parts of an inch of the brass scale aforesaid.

Section 5.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Governor to procure, within — years after the passage of this act, for the use of this Commonwealth, a standard gallon and bushel, to conform to the provision of section second, of this act. The material of said standard to be cast brass.

Section 6.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Governor of this Commonwealth to procure, within — years after the passage of this act, a duly authenticated copy of the troy pound of the mint of the United States, to constitute the positive standard of weight of this Commonwealth. The material of said standard to be brass.

Section 7.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Governor of this Commonwealth to have the positive standards of measures of length and capacity, and of weight, provided by the foregoing sections, inclosed in suitable cases and deposited in the office of the Treasurer of this Commonwealth, to be by him there carefully preserved.

Section 8.—And be it further enacted by the authority aforesaid, That it shall be lawful for the Governor of this Commonwealth, when he shall deem it expedient, to have tested the conformity of said positive standards of measure and weight to the foregoing provisions of this act, or to the natural invariable standards hereinafter provided.

Section 9.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Governor to provide, within — years after the passage of this act, for each of the counties of this Commonwealth, at the charge of the counties respectively, duly authenticated copies of the positive standards of measures of length, of capacity, and of weight, referred to in the foregoing sections, of the material therein referred to, and of approved construction. And having caused the same to be duly stamped, to have them delivered to the Commissioners of the counties respectively, to be used as standards for the adjusting of weights and measures, and for no other purpose.

Section 10.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Commissioners of the respective counties, at least once in every ten years, and oftener if they have reason to believe it necessary, to cause the standards of the respective county to be examined and tried, and, if necessary, to be corrected or renewed according to the standards of the Commonwealth heretofore referred to.

Section 11.—And be it further enacted by the authority aforesaid, That it shall be the duty of the Governor, within — years after the passage of this act, to cause the positive standards, herein described, to be referred to natural invariable standards, and to deposite in the office of the State Treasurer the authentic certificates of such reference, with the apparatus by which it was made. The length of the standard yard to be compared with that of the pendulum vibrating seconds at a certain and defined spot in the Independence Square in the city of Philadelphia or in some unalienable public property, at an ascertained and convenient temperature and pressure; all the circumstances of the comparison to be stated. The standard of weight to be compared with that of one hundred standard cubic inches of water, at its maximum density, and at a convenient atmospheric pressure.

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An Act to fix the Denominations of Measures and Weights in the Commonwealth of Pennsylvania.

Section 1.—Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same: That the denominations of linear measure of this Commonwealth, whereof the yard, as heretofore provided, is the standard unit, with the relations thereof, shall be as follows:

12 inches	make 1 foot.
3 feet	make 1 yard.
5½ yards	make 1 rod, pole, or perch.
40 rods	make 1 furlong.
8 furlongs	make 1 mile.

Section 2.—Be it further enacted by the authority aforesaid, That the denominations of superficial measure of this Commonwealth, whereof the square of the linear yard, as heretofore provided, is the standard unit, with the relations to said standard, and to each other, shall be—

30¼ square yards	make 1 pole or perch.
40 square poles	make 1 rood.
4 square roods	make 1 acre.
640 acres	make 1 square mile.

Section 3.—Be it further enacted by the authority aforesaid, That the denominations of liquid measure of this Commonwealth, whereof the gallon, as heretofore provided, is the standard unit, with the relations to said unit and to each other, shall be—

4 gills	make 1 pint.
2 pints	make 1 quart.
4 quarts	make 1 gallon.
31½ gallons	make 1 barrel.
2 barrels	make 1 hogshead.
2 hogsheads	make 1 pipe.
2 pipes	make 1 ton.

Section 4.—Be it further enacted by the authority aforesaid, That the denominations of dry measure of this Commonwealth, whereof the bushel, as heretofore provided, is the standard unit, with the relations to said standard and to each other, shall be—

4 pecks to make 1 bushel.

And the minor divisions of the peck shall be its aliquot parts. Provided, that the form of the dry measures shall be conical, that the diameter of the circle of the top of the measure shall be not less than one twentieth greater than the diameter of the bottom of the measure, and the height not more than nine twelfths of the diameter of the bottom.

Section 5.—Be it further enacted by the authority aforesaid, That the denominations of weight of this Commonwealth, whereof the troy pound, as heretofore provided, is the standard unit, with the relations thereof to said standard and to each other, shall be—

24 grains	make 1 penny-weight.
20 penny-weights	make 1 ounce.
12 ounces	make 1 pound.

Section 6.—Be it further enacted by the authority aforesaid, That the denominations of weight of this Commonwealth, whereof the pound avoirdupois, as heretofore provided, is the standard unit, with the relations to said pound and to each other, shall be—

16 drams	make 1 ounce.
16 ounces	make 1 pound.
25 pounds	make 1 quarter.
4 quarters	make 1 hundred.
20 hundreds	make 1 ton.

On the Proposed Ship Canal from Oswego, through Utica, to Albany.

To the Editor of the Railroad Journal:

Sir—Having understood that you were one of the advocates for the proposed ship canal, from Oswego through Utica to Albany, I have transcribed the following facts, and have added a few suggestions in relation to them, with a view to their insertion in your paper. I shall deem myself amply repaid for the trouble I have taken, if it is the means, in however humble a way, of engaging the attention of our citizens towards this highly important object. The idea of a water communication from Lake Ontario to the Hudson is by no means one of those forced and chimerical projects by which the present day is so eminently characterized; indeed, we believe that it is the first towards which any attention was turned. As early as the year 1791, Mr. Elkanah Watson, one of the Commissioners of the Indian Treaty at Fort Stanwix, travelled as far west as the village of Geneva, and so impressed was he, by his personal observation, of the practicability, and comparatively small outlay of an internal navigation from Albany to Oswego, that in a letter written to a friend while on his very first excursion, he says, "We are sailing parallel to the great Ontario Ocean, which I hope to see; and enjoy in delightful anticipation the prospect of a free and open water communication from thence to the Atlantic via Albany and New-York." Upon his return, he immediately communicated the result of his observations to General Schuyler, with a view of obtaining the influence of this great man towards bringing the project, in some shape, before the Legislature of the State: with what success, the writer is not aware. The ensuing year, however, the "Western Inland Lock Navigation Company" was incorporated, for the purpose of improving the navigation of the Mohawk and Seneca rivers, and of opening a communication between both, by means of Wood creek and Oneida lake; and eventually to effect a complete communication with Lake Ontario. Owing, however, to the want of the necessary means, little else was done than the construction of the locks at Little Falls, and some trifling improvements in the Mohawk. The Erie Canal at that time became the all-absorbing project, and merged in itself the little interest that had been excited in this, at that day considered, minor undertaking.

We have mentioned the above facts in support of the assertion, this project is not the result of a day's growth. Surely, the remark of the "time not having yet arrived for agitating this question when can hardly be thought valid," we see that, even at a time when the immense forest west of Utica was a stranger to the sound of the axe, when even the name of the Erie Canal was as yet unknown, men were found so convinced of the importance of this work, as to have organised themselves into a company, and to have actually commenced the construction of a work having the very same objects in view as that which we are at present advocating. As soon, however, as the experiment of the Erie Canal was successfully tested, the old project of a communication with the lake was again revised; and after some little delay, the year 1826 witnessed the commencement, and 1828 the completion, of a canal, of the same dimensions, from Oswego to Salina. This, together with the one proposed from Sodus Bay to Montezuma, has for its object the interception of the lake trade. The necessity, however, of a transhipment at the the harbors of Oswego and Big Sodus, from the larger craft of the lake to the smaller barges of the canal, has so much increased the cost of transportation as will inevitably prevent their attaining in any great degree the objects proposed by the Ship Canal.

Fully alive to their interests the inhabitants of Oswego and Utica have since been taking the necessary preliminary steps, the Legislature has been petitioned—committees have been appointed for the collection and transmission of information on the subject, and with a view to engage the attention of the people towards this project.

We have endeavored in the above to give some little history of the Canal. We would now adduce some few facts, and endeavor to prove by them that the day has arrived when the State in general, and the City in particular, (if they would consult their own interests,) are called upon to take immediate measures towards the construction of this work.

The policy of Great Britain towards her Canadian colonies is one of the utmost liberality. She is fully aware of the great facilities they possess by nature, and she is rapidly improving those facilities by the most magnificent works of art. The Rideau Canal, and that now constructing round the Rapids, have proved that the river St. Lawrence is not the bugbear we always believed it to be. The success of the Welland Canal is no longer a matter of speculation. The Ship Canal from Lake Huron to Lake Ontario is now under examination by British engineers. The St. Johns and Chambly Canal will be finished in a year. In short, on our whole frontier, such preparations are making, as will, if not shortly counteracted by our own exertions, divert from us our boasted trade; and which, in peace, will feed the treasury, and, in war, will nerve the energies of a jealous and enterprising commercial rival. Every inducement is now offered by the government for emigration to their colonies. The climate of Upper Canada is as genial, the land as fertile, and the facilities of purchasing and settling as great as in any of the States. And we need only mention that there were 50,000 emigrants landed last year at Montreal, to prove that the tide of emigration is setting towards the Canadas.

Such is the present state of things abroad; let us now turn our attention to our sister cities. Among them, too, the spirit of improvement is making the most rapid progress. Boston, Philadelphia, Baltimore, Washington, and Charleston, are all, (some by canals and some by railroads,) making every exertion to secure for themselves a portion, at any rate, of the trade of the "far west." Pennsylvania is the most ambitious competitor we have to contend against. By her increased and increasing facilities, she is rapidly driving us from the valley of the Mississippi. Owing to the lateness of the season at which the harbor of Buffalo is clear from the ice, our Erie Canal is a nullity till about the 20th April, full six weeks later than the Pennsylvania Canal.

"Differences seem to have arisen between the New-York and Ohio Canal Boards, which have produced a conditional resolution of the Ohio Commissioners for doubling the rates of toll on the Ohio canals, on all merchandise transported in a direction from Lake Erie." And even if this unfortunate collision should be adjusted, Pennsylvania is determined to avail herself of all her advantages, and by an immediate extension of her Beaver Canal, intercept, at the mouth of the Conneaut at Lake Erie, that trade upon which our Canal mainly depends. Thus, fellow-citizens, do we see that while we are vainly relying on the infallibility of our one canal, our powerful neighbors are not leaving a stone unturned to effect their object. Should this state of things be allowed to continue without any exertion to counteract its evil effects, the day is not far distant when we shall be obliged to yield to another that enviable distinction, which we have so long held, of the "great commercial emporium."

Let us now look upon the reverse of the picture, and consider the means we possess for an effectual means of preserving our western trade.

Small as is the Oswego Canal, and notwithstanding the necessity of the transhipment on the lake, goods are now carried from New-York to Cleveland for a less price by way of the lake than by the Canal, as will appear by the following.

"*Comparative View of Expenses in the transportation of Merchandise from New-York, via the Erie Canal and Buffalo, to Cleveland, Ohio, and by the new channel of Lake Ontario and the Welland Canal, to the same place.*

The present regular price for transportation from New-York, per the Erie Canal and Buffalo, to Cleveland, as charged by Hart, Griffith & Co. and others, is,

For dry goods, per 100 lbs. - - - - $1 56
On all heavy goods, per 100 lbs. - - - 1 45

The present regular price for transportation from New-York, via Oswego, Lake Ontario, and the Welland Canal, to Cleveland, as charged by I. S. Wyckoff, agent for Troy, Oswego, and Ohio Line, is,

For dry goods, per 100 lbs. - - - - $1 20
On all heavy goods, per 100 lbs. - - - 1 09

The Ontario channel is a new one, and forwarders say the price of freight will be reduced when vessels are built better adapted to the Welland Canal navigation. Vessels are now building for this purpose, to carry 180 tons."

How much the more, then, will we be enabled to compete with other means, if we do away, by the ship canal, this extra transhipment.

Objections have been urged against the risk incurred by the navigation on the lakes. We need only, we think, adduce the fact, that insurance is effected at as low a rate upon them as on our inland canals. Harbors are numerous on all the lakes; on Ontario are Oswego, Big Sodus, Genesee, and Braddock's Bay; on Erie are Black Rock, Buffalo, Dunkirk, Erie, Conneaut, Ashtabula, Cunningham, and Cleveland. There are also harbors at the mouths of Grand, Black, and Huron rivers; in all of which, improvements requiring immense outlays of money have been made, under a judicious system of operations, by the General Government. Nature, too, in favoring us with a milder climate than Montreal and Quebec, has done much to aid us. All then we want to divert into our own lap the trade and resources of this immense section of country is the ship canal. Let this communication be once effected, and "hundreds of ships that now bound upon the billows of these inland seas," bearing away to our neighbors, for want of a market at home, our own productions will seek this easiest, and most natural channel. Let us awake, then, fellow citizens, to our own interests, ere yet it is too late: exert ourselves now, and in three years' time, with an expenditure of only 2,000,000 of dollars, we are safe.

In the coming session of the Legislature this project will be submitted for their consideration; we have no doubts for its result—the means only are wanting; and we hazard little in saying, that the name of that statesman, who, throwing aside the petty trammels of party politics, shall urge to a successful completion the Ship Canal, shall be handed to latest posterity, hallowed by the association with that of the "immortal Clinton." B.

[For the New York American.]

Oswego, August 27, 1834.

Mr. Editor: I noticed in your paper of the 22 inst. an article signed "Pearl street" on the subject of the contemplated convention at Utica on the 11th of next month, to consider the project of a Ship Canal from Oswego to Utica, and thence to the Hudson. The writer is evidently unacquainted with the object in question, although he treats it, in a manner, as if he was quite *au fait*. Permit me through your columns to furnish to "Pearl street," and others, some of the principal reasons that will probably be offered to the convention at Utica in favor of the project.

1. The vast superiority in point of economy in transportation effected upon natural water communications admitting of navigation by large vessels or Steamboats, over transportation upon Canals and

Railroads. This has been satisfactorily proved by experience on the Hudson, the Lakes and the great rivers of the west—for instance, a bushel of wheat is now carried from Troy and Albany to New York, for *three* cents, while the same transportation for a like distance upon the canal can not be effected for less than *ten* cents: the conclusion therefore seems unavoidable, that if the products of the west can find a passage to the Ocean by Steamboats or other large vessels, they will undoubtedly seek that channel.

3. The extraordinary efforts now making in the Canadas for the improvement of the great natural navigable facilities existing within those Provinces, namely, the gigantic work in progress on the St. Lawrence of locks 200 feet in length, 55 feet in width, and 9 feet in depth from the mitre sill. The existence of the Welland Canal, connecting Lakes Erie and Ontario by a ship canal, with locks of 110 feet in length, 22 feet in width, and 8 feet in depth; probably to be hereafter enlarged to a corresponding size with those now constructing on the St. Lawrence. The contemplated construction of a Railroad from Queenstown to Chippewa. The easy connection by ship canal, of Lake Huron, through Lake Simcoe, with Lake Ontario, now being surveyed by order of the Canadian Government.

3. Communications will be laid before the Convention from the ablest Engineers, proving that a ship canal can be constructed with ease from Lake Ontario, via Oswego and Oneida Lake, to Utica, at a cost of less than one million of dollars, and although the cost from Utica to the Hudson will be considerably greater, that it is easily within the means of the State.

4. It will be urged that the existence of the Welland Canal, and the improvements on the St. Lawrence, not only destroy the arguments used by the Canal Commissioners in their report of 2d March, 1811, to the Legislature, against the route by Oswego, but actually prove the necessity of its being adopted on the most enlarged plan it is capable of, without further delay.

☞In that famous report the Commissioners say: "Two routes have been suggested to obtain the trade of the West; one, the direct communication to Lake Erie, now adopted—the other, a cut round Niagara Falls, and from Albany by Rome to Oswego, terminating the Canal there." Notwithstanding that limited pecuniary resources were at that time a great impediment, still on a comparison of the cost and obstacles of the former with the latter, they put the interrogation, "Whether being less difficult and expensive, it would not be advisable to descend into Lake Ontario, rather than encounter the difficulty and expense of the other course?" To which they reply: "The Commissioners believe it would not: and without relying as they might for support of their opinion on the comparative expense of transportation, it is sufficient to say, *that articles for exportation, when once afloat on Lake Ontario, will, generally speaking, go to Montreal, unless our British neighbors are blind to their interests.*"

5. It will be stated, that the Erie Canal from Buffalo to Albany will in a few years scarcely suffice for the transportation of the produce of our own State, much less carry that of the great West, should the cost of transportation even be no obstacle.

6. It will be shown, that unless a cheaper mode of transportation of the produce of the West can be adopted, it must and will in a few years hence find its way down the St. Lawrence! I will here instance the effect it may have in our own State: The freight of a barrel of flour from Rochester to New York, on the Erie Canal, is not less 62 1-2 cents—from Oswego, 58 cents. A great quantity of Western flour is annually sent to Boston, &c. Let the improvements on the St. Lawrence be once completed—namely, locks of 200 feet long, 55 feet wide, and nine feet deep—what will prevent our Eastern merchants from constructing suitable vessels of a large class, and carrying to Oswego, Rochester, &c., their fish, their oil, and thousand other bulky articles, and bringing away our Western flour and other produce.

Sir, we ask no favors from your citizens—we only wish to open their eyes to their true interests! For that purpose the Utica Convention has been called; and if "Pearl Street" can point out a better plan to secure the Western trade to New York, I for one shall cheerfully submit to the loss of the few crumbs that I expect to fall to my share if the object of the Utica Convention should be carried into effect. All we desire is to arouse the New York merchants from the state of lethargy and security in which they have been for some years past. Let them look to Pennsylvania, and they will learn that Cotton and Tobacco are now coming up the Ohio to Pittsburg, and are thence brought to Philadelphia in considerable quantity. I have heard from good authority that flour is brought from Pittsburgh to Philadelphia for 75 cents per barrel. And what, I ask, will be left to New York of the great western trade, when the Canadian improvements once completed, offer a still cheaper channel than any now existing for the transportation of the bulky products of the West.

I am, with great regard, your most ob't serv't.

AN OLD MERCHANT.

[FOR THE NEW YORK AMERICAN.]

MR. EDITOR: As the newly raised regiment of Dragoons have, ere this, started on their summer campaign, one object of which seems to be to effect a treaty with the Pawnees, I have thought that a brief account of these Indians might not prove unacceptable, and; perhrps, in this armed truce of politics would serve to fill a column of the "American," not devoted to more important matters.

The Pawnees may be divided into two classes or tribes, the Pawnee Piqua's, or Pawnees of Arkansas and Texas, and the Pawnees of the Missouri. The former are a roving race like the Sioux, have no permanent villages, and when not engaged in predatory excursions, follow the range of the Buffalo. It is of course difficult to estimate their numbers: however, I should suppose that 3000 warriors would be within bounds. They must be numerous; for their war parties often amount to 3 or 400, and they have been known to carry on, at one time, successful wars both against their ancient enemies, the Osages, and the Mexican tribes of Commanches and Tetons. Theit language is the same with that of the Pawnees of the Missouri, with whom they are on friendly terms, although there exists no formal alliance between the tribes, unless, which is not unlikely, a league has recently been made. They are good horsemen, and are well supplied with large droves of that noble animal. Their arms and mode of fighting are similar to those of the Pawnees of the Missouri.

The Pawnees of the Missouri consist of three bands, residing in separate villages. They are in strict alliance, and may, perhaps, bring into the field 2500 or 3000 horses. They are called—the Pawnee Republicans, whose village is on the Republican branch of the Konzas—the Grand Pawnees and the Pawnee Loups, The towns of the two last are on the la Platte, and within a few miles of each other. A Pawnee village consists merely of a promiscuous collection of Dirt Lodges; these are spacious and permanent dwellings: a description of them would not probably be new to your readers. For some months in the year the whole tribe are absent on the Buffalo Hunt: they then live in Skin Lodges. A Pawnee Brave in his war dress is a truly formidable looking personage: he wears an enormous head dress, formed of feathers of the eagle, the swan and other large birds, a necklace of the claws of the grisly bear, and leggins of deer-skin, grotesquely embroidered with quills of the porcupine; the edges are fringed with feathers and tufts of horse hair, dyed of various colors, and not unfrequently human scalps interspersed with beads and small bells. The buffalo robe floats loosely in the wind, and is secured around the waist by a girdle, leaving the arms, face and the body naked, and smeared with parti-colored pigments in quaint figures. The face is also painted in the same savage taste; black, the war color, always predominates. His horse, a fine animal of the wild breed of Mexico, is gaily caparisoned with broad leathern bands, on which are sewed beads and pieces of colored cloth, and fringed with feathers, bells, and small pieces of tin and other metals. For arms, he uses the bow, which is short, and well adapted for use on horseback: it is usually ingeniously made of ribs of the buffalo, strengthened with sinews of the elk or deer: his quiver, formed of panther or bear skin, hangs at his back, well stored with arrows; these are well feathered, and 30 inches in length, without the head, which is of iron, very long and narrow, and loosely fitted to the shaft: the lance is 7 1-2 feet in length, sharp pointed and adornod with feathers: the war-club, which usually hangs attached to the saddles, is about 3 feet long, and is made of some heavy wood; the head is often armed with iron spikes, inserted in the wood, and is similar in form to the ancient mace: this formidable weapon is equally adapted for close conflict, or to be hurled by the hand. The knife and tomahawk, as other Indians. A very few are (or rather were) armed with carbines. The shield now only remains to complete his equipments; it is circular, about two and a half feet in diameter, and is formed of prepared buffalo skin, called by the trappers Pas (quere Pare?) Fleche; it is ornamented with rude emblazoning, fringed with feathers and bells; when not in use it is slung by the side of the quivers. The shield is an admirable defence in conflicts with an Indian foe; for when mounted the Pawnees discharge their arrows from under their horses necks; then with the assistance of the shields their bodies are almost entirely protected.

From the roving habits of these tribes, I think the prospect of finding them in their villages is but faint: they will either be absent on their annual hunt, when their lodges are nearly deserted, or what is still more likely, the approach of so large a force will excite their natural distrust to such a degree, that they will at once retire *en masse* to their distant encampment in the desert, or in the gorges of the mountains, whence they will not emerge until compelled by the approach of winter. Thus there is little probability, even were it desirable, that our troops will come into collision with these Indians; for although brave, they never *attack* but with the chances in their favor. Like other savages, the Pawnee always endeavors to surprize his enemy, and like them prefers an hour or two before dawn, and a dark and stormy night. An impetuous charge is made; and if at all successful, the contest rages for hours with the greatest fury; but should they be too warmly received at the outset, or lose many warriors in the course of the fight, they retreat at a preconcerted signal, scattering into small parties, to divide and distract the attention of their pursuers, and when in safety make for the distant rendezvous previously appointed.

ALPHA.

Love and Romance.—A greater number of young girls, between the age of fifteen and eighteen, and of young men between eighteen and twenty-four, fall victims to what they call love, than any other particular class of disease—and more particularly in England and Ireland than any other country on earth. This is from the force of early impressions peculiar to those countries, and of comparatively recent growth, the effect produced by a certain class of romance writers. These writers give an obliquity to the young mind which leads to destruction. Scarcely has a young girl laid by her *Reading made Easy*, when she becomes a subcriber to some trashy library, and the hours which, in the country, or in a land where education is unknown, they would employ in jumping about in the open air, are now consumed with intensity of thought upon the maudlin miseries of some hapless heroine of romance, the abortion of a diseased brain. Her imitativeness, as Spurzheim would phrenologically observe, becomes developed, and she fixes on her favorite heroine, whom she apes in every thing—sighing for her sorrow, and moaning to be as miserable. She fixes immediately upon some figure of a man—some Edwin or Edgar, or Ethelbert, which she thinks will harmonize with the horrors of the picture, and she then enjoys her tears and her tortures to her heart's satisfaction. Languor, inaction, late hours, late rising, and increasing sighing, derange her digestion—paleness, loss of appetite, and general debility follow; the cause continues, the effect increases, and hectic fever puts an end to the romance. We have known a young Irish lady who read herself into this situation. She was, at the age of 13, as lively, as healthy and as beautiful a little promise of womanhood as that country ever produced. When the Leadenhall-street romancers crossed her way, an officer of a very different sort of troop became her hero. She would "sit in her bower" (the second floor window) and gaze—and gaze upon his steed, his helmet, and his streaming black-haired crest, as he passed to mount guard, until she sobed aloud in an extacy of melancholy. She never spoke to this 'knight,' nor did she even seek to have an acquaintance—lest, perhaps, that a formal proposal, a good leg of mutton dinner, and all the realities of domestic happiness might dissipate the sweet romantic misery she so much delighted in. A year passed over—'she pined in thought, and with a green and yellow melancholy,' entered a convent (for that is the climax of romance,) where she died in a few months.—[Medical Advertiser.]

The Emperor of Russia has, through the medium of Baron de Krudener, Minister Plenipotentiay at Washington, presented Joshua Shaw, Esq. Artist, of Philadelphia, with $500, for an improved percussion cannon lock, invented by Mr. Shaw.

NEW-YORK AMERICAN.

AUGUST 30—SEPTEMBER 6, 1834.

LITERARY NOTICES.

LETTERS ON PRACTICAL SUBJECTS, TO A DAUGHTER, by WM. B. SPRAGUE, DD., Pastor of the Second Presbyterian Church, Albany. Third American edition, revised and enlarged. *New York*, D. APPLETON & Co.—It is no longer asked now, with a supercilious air, in England, "who reads an American book?" American books not only are read, but, as we find by some prefatory remarks in the well printed and handsome volume before us, they are sometimes printed—and, with slight alterations, reprinted as English works.

Such, it seems, was the fate of Dr. Sprague's "Letters to a Daughter," originally published anonymously in this country. A genuine edition of the work was circulating in England under the direction of the London Tract Society, when a Glasgow bookseller seized upon it, made some omissions but no additions, and put forth a volume under the title of "The Daughter's Own Book." By this title it was republished in Boston, as a book of foreign origin—and by this title it was noticed and praised in this paper, without any suspicion, as far as we remember, of its being a piracy.

The present edition is issued under the sanction of Dr. Sprague's name, and is the only one therefore for which he is in any way responsible. It remains only for us to say, that the terms of commendation in which we spoke of "the Daughter's Own Book," we very cheerfully, and with greater emphasis, desire to repeat of "Letters on Practical Subjects to a Daughter." We present the whole of Letter XI—not as better than others, but as treating of a topic that is not always sufficiently considered by young persons.

Intercourse with the World.

MY DEAR CHILD,—In several of the preceding letters I have taken for granted that you are to mingle, in greater or less degree, in society. It is equally essential to your respectability and usefulness, that you should not live the life of a recluse. The constitution of your nature and the circumstances of your condition clearly indicate that you were made to be social. As it is a subject, however, in relation to which there is a strong tendency to extremes, and on which you will be in great danger of being misled, I shall suggest a few thoughts in the present letter, which may serve to aid in forming your opinions and directing your conduct.

I begin my advice to you on this subject by a caution that you should not make your entrance into society at too early a period. It too often happens that girls, long before they have completed their education, and even at a comparatively early stage of it, have contracted a strong relish for being in the world; and unless prevented by the influence of parents or instructers, they are found thus prematurely in the gayest circles of fashion. The consequence of this is, that at best, a divided attention is rendered to their studies; that their opportunities for intellectual improvement are enjoyed to little purpose; and that the period in which should be laid the foundation of a solid and useful character, is perverted to the formation of a habit of mental inaction, and not improbably to cherish a spirit of intolerable vanity.

Now I do not insist that you should actually decline all society up to the time of completing your education; but I wish that your visiting, previous to that period, should be, for the most part, of an informal character; and that you should not generally consider yourself at liberty to accept invitations, even if you should receive them, to mingle in set circles. This accidental intercourse of which I have spoken, is all that will be necessary during the period of your education, to aid you in the formation of your manners; and any thing beyond it will almost inevitably interfere with your intellectual improvement, and of course detract from your ultimate standing in society.

Let me assure you too that you will be far less acceptable in society, if you make your appearance prematurely, than if you wait till a proper period. The common sense of the world is quick to discern any impropriety on this subject; and if, while you are yet a child, you are seen among those of mature age, virtually claiming to be as old as they, you can expect nothing else but that you will be set down as deficient either in modesty or good sense. Better for your reputation that you should come too late into society than too early; for though in the one case you might lose something in point of manners, yet in the other you would lose more in the estimation of the world, on the score of delicacy and correct judgment.

It is not more important that you should avoid going into society too early, than it is, that when you do enter it, you should avoid mingling in it too much. One bad effect of this would be, that it would leave you with too little time for the discharge of your private and domestic duties. The culture of your mind and heart, in connexion with the ordinary cares of domestic life, requires that a large part of your time should be spent at home; and you cannot, without great injustice to yourself, and those with whom you are connected, neglect these more private duties, for the sake of being always in the bustle of the world. It is a rare thing that you will find a lady who devotes an undue proportion of her time to visiting, but that if you follow her into the domestic circle to the chamber and the fireside, you will find that she evinces a proportional neglect of some of the duties belonging to the station she occupies. She is either neglecting to cultivate her understanding, or neglecting to keep her heart, or neglecting to use the means which Providence has put into her hands for the intellectual and moral improvement of those with whom she is immediately connected.

Recollect also that the error against which I am endeavoring to put you on your guard, would not only prevent your attention to more important duties, by occupying the time which should be allotted to them, but it would serve actually to give you a distaste for those duties. Allow yourself in a constant round of company, even for a short period, and it will be strange indeed, if you not begin to feel that company is your only element; if you do not, in a great degree, lose your relish for the pleasures of the domestic fireside; if you do not find yourself complaining of ennui, when you happen for a season to be providentially shut up at home. I need not stop to show how entirely such a habit of feeling must disqualify a female for the most important relations she can ever sustain.

Moreover, an extravagant fondness for society, and an excessive indulgence of this inclination, are almost sure to create a habit of dissipation, both as it respects the intellect and the feelings. The mind, by being conversant with the ever varying scenes of social life, loses, in a great degree, the command of its own powers; and the attempt to concentrate them on any particular subject, were scarcely more likely to succeed than would be an attempt to collect every mote that was floating in the surrounding atmosphere, while the atmosphere was agitated by a whirlwind. The moral feelings too are subject to a similar influence; for not only is there usually an entire absence of self-communion, and all that secret discipline of the affections, which is essential to the right keeping of the heart, but too often there are the levities of the world, scenes from which there is a studied exclusion of religion, and even a designed introduction of much that is fitted to bring religion into contempt. I do not say that this evil, in its whole extent, is commonly found in any of the walks of decent society; but I do say that it sometimes exists in the frightful dimensions which I have attributed to it; and that it commonly exists in so great a degree as to render an excessive intercourse with the world a fruitful source of mischief.

You will anticipate me when I say, in this connexion, that it becomes you to use the utmost caution in selecting the circle with which you are to associate. I hardly need admonish you to set it down as a fixed purpose that you will never, intentionally, be found in any circle in which there is any thing to encourage immorality, or any lack of reverence for the sacred principles and precepts of religion. I would have you, moreover, beware of mingling in the gay world; in scenes which are designed to produce an unnatural and feverish excitement of the spirits, which are fraught with no intellectual or moral advantage, and in which the introduction of grave or useful discourse would be the signal for disquietude or disgust. I do not, by any means, insist that your associates should all be from the number of those who are professedly or actually pious; nor do I object at all to your intercourse with them being of a cheerful, and sometimes, if you please, an amusing character; but I do insist that they should be persons of correct moral views and habits, and that your associating with them should be for some higher purpose than merely to kill time, or to cultivate a spirit of trifling. It were desirable too, as I have had elsewhere occasion to remark concerning your particular friends, that the circle with which you chiefly associate, should possess a good degree of intelligence; that thus your social intercourse may be instrumental of improving not only your heart but your understanding. If you take due precautions on this subject, the time that you pass in society, instead of being lost, may subserve, in a high degree, your most important interests; while the neglect of such precautions will render the same hours a mere blank in the period of your probation.

It is natural and proper that those with whom you chiefly mingle should be from the same walks of life with yourself. You may, however, sometimes providentially be thrown among those, the circumstances of whose birth and education have given them a rank quite superior to any which you can claim; and as the case may be, persons of this character may proffer you their confidence and friendship. In all cases of this kind, never suffer yourself to be deluded by any thing that is connected with the pride or circumstance of life; and do not think it a privilege to mingle in society of the most elevated worldly rank, provided there be any thing in it to put in jeopardy your moral principles and feelings. And let me say too, that, though you may very properly accept a fair and honorable introduction into any circle, no matter how elevated, yet you ought never, by a single action, word, or look, to signify a wish for any such distinction. It would indicate a species of ambition certainly not the most honorable, and if you should accomplish your object, it is more than probable you would meet the reception which is due only to an intruder.

You would do injustice to yourself, and be wanting in the discharge of your duty, if you should not occasionally, and even frequently, mingle in the lower classes of society. Not that I would be an advocate for confounding or annihilating those distinctions which Providence has manifestly ordained; nor would I have you, in your intercourse with those in the humble walks of life, lose sight of the mutual relations which you and they sustain to each other.

But I would have you go among them with the benign aspect of friendship; I would have you make them feel that you recognize them as fellow creatures, placed in many respects on the same level with yourself; and I would have you leave an impression upon their minds that the adventitious distinctions of life are really of little moment, compared with those points in relation to which all stand upon an equality. The condescending yet dignified familiarity which this species of intercourse would discover, would do more than you can easily imagine, to render the poor contented and cheerful, and to secure for yourself their gratitude and confidence. And let me say too, that its influence upon your own heart would be most salutary; that it would serve to refine and elevate your social affections, and confer dignity on your whole character.

There is one more point involved in the general subject of this letter which is too important to be omitted—I refer to the deportment which it becomes you to maintain towards the other sex. The importance of this, both as it respects yourself and others, you can scarcely estimate too highly. On the one hand, it has much to do in forming your own character; and I need not say that any lack of prudence in this respect, even for a single hour, may expose you to evils which no subsequent caution could enable you effectually to repair. On the other hand, the conduct of every female who is of the least consideration, may be expected to exert an influence on the character of every gentleman with whom she associates; and that influence will be for good or evil, as she exhibits or fails to exhibit, a deportment that becomes her. Indeed, so commanding is this influence, that it is safe to calculate upon the character of any community, from knowing the prevailing standard of female character; and that can scarcely be regarded as an exaggerated maxim, which declares that "women rule the world."

Let me counsel you then never to utter an expression, or do an act, that even looks like soliciting any gentleman's attention. Remember that every expression of civility, to be of any value, must be perfectly voluntary; and any wish on your part, whether directly or indirectly expressed, to make yourself a favorite, will be certain to awaken the disgust of all who know it. I would not recommend to you any thing like a prudish or affected reserve; but even this were not so unfortunate an extreme, as an excessive forwardness. While you modestly accept any attentions which propriety warrants, let there be no attempt at artful insinuation on the one hand, or at taking a man's heart by storm on the other.

Be not ambitious to be considered a belle. Indeed I had rather you would be almost any thing else that does not involve gross moral obliquity, than this.—It is the fate of most belles that they become foolishly vain, think of nothing, and care for nothing, beyond personal display, and not unfrequently sacrifice themselves in a mad bargain, which involves their destinies for life. The more of solid and enduring esteem you enjoy, the better; and you ought to gain whatever of this you can by honorable means; but to be admired, and carressed, and flattered, for mere accidental qualities, which involve nothing of intellectual or moral worth, ought to render any girl, who is the subject of it, an object of pity. You are at liberty to desire the good opinion of every gentleman of your acquaintance; but it would be worse than folly in you to be ambitious of a blind admiration.

I will only add, that you ought to be on your guard against the influence of flattery. Rely on it, the man who flatters you, whatever he may profess, is not your friend. It were a much kinder office, and a real mark of friendship, to admonish you tenderly, yet honestly, of your faults. If you yield a little to flattery, you have placed yourself on dangerous ground; if you continue to yield, you are not improbably undone. Adieu for the present.

YOUR DEVOTED FATHER.

Æschylus—constituting Vol. XIII. of *Harper's Classical Family Library*. New York: HARPER & BROTHERS.—The translation here offered of the Tragedies of Æschylus is by the Rev. R. POTTER; and it is received by scholars as one giving as distinct a glimpse, as translation ever can, of a great original. The volume is preceded by an Essay, or a large portion thereof, on the Grecian Drama, &c. together with a Memoir of Æschylus, from the pen of Mr. Harford, which that gentleman had prefixed to his translation of *Agamemnon*. To the scholar and to the unlearned both, this will be a welcome volume.

THE CHRISTIAN YEAR—Thoughts in Verse for the Sundays and Holidays throughout the Year—Phil: CAREY, LEA & BLANCHARD.—The author of these "Thoughts in Verse," beautiful and breathing, is the Rev. Mr. KEBLE, Professor of Poetry in the University of Oxford. The American Editor we take to be the Right Rev. Bishop of New Jersey—himself a poet, and the more alive, therefore, to the poetical beauties of a work devoted to aid the influence of the sublime Liturgy of the Episcopal Church.

"Apart from its high poetical merit," says the American Editor, "the Christian Year is recommended most earnestly for its pure, affectionate and elevating character, as *a family book*." We cannot more effectually confirm the opinion thus expressed, than by copying the lines on

HOLY BAPTISM.

Where is it, mothers learn their love?—
In every Church a fountain springs
O'er which th' eternal Dove
Hovers on softest wings.

What sparkles in that lucid flood
Is water, by gross mortals ey'd:
But seen by Faith, 'tis blend;
Out of a dear Friend's side.

A few calm words of faith and prayer,
A few bright drops of holy dew,
Shall work a wonder there
Earth's charmers never know.

O happy arms, where cradled lies,
And ready for the Lord's embrace,
That precious sacrifice,
The darling of his grace!

Bless eyes, that see the smiling gleam
Upon the slumbering features glow,
When the life-giving stream
Touches the tender brow!

Or when the holy cross is sign'd,
And the young soldier duly sworn
With true and fearless mind
To serve the Virgin-born.

But happiest ye, who seal'd and blest
Back to your arms your treasure take,
With Jesus' mark impress'd
To nurse for Jesus' sake:

To whom—as if in hallow'd air
Ye knelt before some awful shrine—
His innocent gestures wear
A meaning half divine:

By whom Love's daily touch is seen
In strengthening form and freshening hue,
In the fix'd brow serene,
The deep yet eager view.—

Who taught thy pure and even breath
To come and go with such sweet grace?
Whence thy reposing Faith,
Though in our frail embrace?

O tender gem, and full of heaven!
Not in the twilight stars on high,
Not in moist flowers at even
See we our God so nigh.

Sweet one, make haste and know Him too,
Thine own adopting Father love,
That like thine earliest dew
Thy dying sweets may prove.

We should add, that the typographical execution of the volume is excellent.

A HISTORY OF THE CHURCH, FROM THE EARLIEST AGES TO THE REFORMATION. By the Rev. GEORGE WADDINGTON, M. A. Fellow of Trinity College, Cambridge. 1 vol. New York: Harper & Brothers.—We have here, by a Protestant Episcopal clergyman, a history that strikes us, from the perusal of many of its chapters, as eloquent, learned, and impartial—if impartiality can be attained by any one who has strong and honest convictions, that amid contending sects, his own is clearly right.

The history of the Church is, in some sense, the history of the errors and wanderings, of the vices and virtues, of our common nature. It is, therefore, of more universal interest than any mere profane history. It is, too, addressed to our eternal as well as temporal interests. We think that Mr. Waddington has imparted to this volume, large as it is—for it contains nearly 600 pp. of double columns—such a degree of attraction, that will commend it to readers of all classes.

The book is stereotyped, and in a fine, clear, legible character. Extracts are, of course, quite insufficient to impart any just idea of such a work as this. In presenting the following, therefore, we are rather tempted by the circumstance, that in his narrative of the persecution of the Christians by Marcus Antoninus, Mr. Waddington opposes himself directly to the authority of Gibbon:

Marcus Antoninus.—It seems singular, that a historian, who makes great profession of candor and universal humanity, should almost have excepted from the number of persecutors the only name (as far at least as this part of our inquiry) to which that ignominious designation appears justly and certainly to belong: for under all the preceding emperors, the injuries inflicted upon the Christians had either been occasional, as arising from some casual circumstance, or staining only a portion of their reign; or partial, as confined to a few provinces, or perhaps cities of the empire. Moreover, they had been sometimes excited, and generally encouraged, by popular irritation; they had been directed against a small and obscure and calumniated sect, through the operation, and according to the seeming intention, of the ancient statutes. And the efforts of individual emperors, were, for the most part, turned rather to the suspension or mitigation of these statutes than to the rigid enforcement of them. In addition to this, let us not forget, that these individuals possessed little means or opportunity to inform themselves respecting the peculiar principles, doctrines, or habits of Christians; still less to examine the foundation of their belief, or even to understand that it had any foundation:—if they permitted the work of destruction to proceed, it was in ignorance and blindness. On the other hand, Marcus Antoninus undertook the task of 'punishment' or prosecution among the earliest of his imperial duties, and he continued to fulfil it with unremitting diligence throughout the nineteen years of his splendid administration. He acted on liberal principles, and his principles were not of partial or local operation, but were equally applicable to every province of his empire. And thus he every where enforced the laws in their full severity; the lives and the property of the convicted were forfeited by the most summary process of justice; and the search which was made after the suspected, and which the uninformed humanity of Trajan had so nobly discouraged, sufficiently proves the activity of the pursuit, and the earnestness of the pursuer, but the most important distinction is probably this:—Marcus Antoninus knew much better the nature of the evil which he was committing: he was acquainted, to a certain extent at least, with the opinions of the Christians, and the innocence of their character; and it is not likely that he had entirely neglected to examine the grounds of their faith. He watched the process of his own inflictions, and when he perceived the fortitude with which all endured, and the eagerness with which many courted them, he coldly reproved the unphilosophic enthusiasm of the Martyrs. And yet, perhaps, his own philosophy was not quite devoid of enthusiasm, or, at least, it was not strictly regulated by reason, when it led him to labor for the destruction of the most moral and loyal portion of his subjects, only because they disclaimed the very superstitions which he placed his pride in despising. Nor again was his practice consistent with his professed contempt of these: for it is said, and seemingly on good foundation, that Marcus Antoninus was frequent in consultation with the Chaldæan sages, deeply conversant with the mysteries of astrology, credulously attentive to oracular prophecy, obedient to the premonitions of dreams, which he believed to descend from Heaven—assertions not incredible, nor inconsistent with his studies or his principles; and there is ground to hesitate whether we should not rather convict him of superstition than hypocrisy. But it is certain that his understanding was of the broadest and most comprehensive description; that it was enlightened by every worldly knowledge, and fortified by frequent meditation; that his character was founded in excellent dispositions, confirmed by the best principles which were known to the Pagan world. His general regard for justice has never been questioned; even his humanity is commonly celebrated; and if the representations of history be not exaggerated, he reached as high a degree both of wisdom and of moral excellence as is attainable by the unassisted faculties of man—and yet this prince polluted every year of a long reign with innocent blood.

In our natural anxiety to honor every form of human excellence, we search for his excuse in the religious policy so long established in the empire.—But we find that those of his predecessors who were disposed to soften or suspend its operation upon Christians, possessed the power to do so; and we cannot doubt that the despotic authority of Marcus would have enabled him to revise or repeal those oppressive statutes, if he had learnt from the books of his philosophers the virtue or the meaning of Toleration. This, indeed, is the real and only ground of his defence; and we shall regard his conduct with less indignation, if we reflect how feeble were the mightiest principles of conduct with which he was acquainted; on what a loose and shifting foundation they rested; how large was the class of virtues which they did not comprehend, and how imperfect were the motives which they proposed for the practice of any. And thus considered, we shall discover, perhaps, some trace of heavenly providence in the circumstance, that the imperial philosopher, flourishing in the maturity of his science, and deficient in nothing which nature or man could bestow, was armed with the highest temporal authority and permitted to direct it against the *infancy* of our faith. From the splendid imperfection of Marcus Antoninus, from the perseverance of his powerful enmity, from its final failure, we may learn what narrow limits have been assigned to the virtue and wisdom and power of unassisted man; and we derive a new motive of gratitude for that heavenly aid, which has fixed our social happiness on a certain and eternal foundation.

The greatest prince of antiquity was succeeded by a son, who neither inherited his virtues, nor imitated his crime; so far from this, that we might almost imagine it to have been the object of Commodus to redeem his numerous vices by his humanity towards the Christian name.

Severus ascended the throne in the year 193, and is represented by Tertullian to have bestowed testimonies of approbation on several distinguished Christians, and openly to have withstood the popular fury which assailed the sect. But this account will apply only to the earlier part of his reign; for in the year 202 (about the time of the publication of Tertullian's Apology) he issued an edict, which indirectly occasioned a variety of inflictions, the most barbarous of which appear to have been perpetrated in Egypt. The professed object of that edict was only to prevent conversion either to Judaism or Christianity; for the fears of the emperor began to be awakened by the extraordinary progress of the latter.—Its effect was to oppress and torture the most zealous ministers of the faith, and to inflame the prejudices of the people against all believers. This enactment continued in force for about nine years, until the death of Severus; and from that period, if indeed we except the injuries inflicted by Maximin (from 235 to 238 A. D.,) and directed chiefly against the instructors and rulers of the churches, the Christians, though occasionally liable to popular outrage, had not much reason to complain of the injustice of the government until the accession of Decius, in the year 249.

THE POLITICIAN'S MANUAL, by EDWIN WILLIAMS. New York: J. VAN NORDEN.—Not only to politicians by profession, but to all who desire to watch

the mutations of public opinion, and from the lessons of the past to read the future, does this little pamphlet present accurate and full means of information.

La Revue Française, pour Aout. N. Y., Hoskins & Snowden.

La France Literaire, Vol. 5, No. 2. N. Y.

Bonaparte, the inexhaustable Bonaparte, supplies one of the most attractive papers in the first named of these periodicals. It is a supplement to the Memoirs and Recollections of the *Duke de Gaete*, Minister of Finance under the Empire. It is too long, however, to be translated, at least for today. From *La France Litereire* we take a shorter one, also connected with the glories of Napoleon, and which certainly records a most extraordinary and, to us, entirely new military feat:

Presence of Mind and Courage of General Bethencourt.—At the moment when the first Consul at the head of the army of reserve was about to cross the great *Saint Bernard*, he ordered General Bethencourt with a corps of 1100 men to move upon Avona by crossing the *Simplon*. Arrived at the pass of *Yeuselle*, this General found himself suddenly checked by an unforeseen obstacle.

The wooden bridge, thrown across a mountain torrent some sixty feet wide, having been carried away by an avalanche, all means of communication between the two banks were cut off: the bed of the rushing torrent lying far below. This old bridge, of the slightest structure, and which was used only by foot-passengers and mules, was built on wooden beams, of which one end was inserted in holes in the rock, and the other was supported by a cross piece. General Bethencourt, whose orders to advance were imperative, resolved at any hazard to do so; and he proved in the end what a resolute purpose can effect.

He remarked that the holes in which the beams had been inserted were perfect; the weight of the falling timber having drawn out the whole of it. A volunteer, whose name even, at that epoch of prodigies, no one thought of inquiring, proposed to let himself down so as to place his feet in these holes, and then, aided by some little inequalities in the rock, to get down, swim across the torrent, and ascend as best he could the opposite wall. The intrepid soldier immediately carried his purpose into effect in the presence of the whole army, trembling at every instant lest he should fail in the unheard of attempt. The anxious eyes of all followed his movements with intense interest: they behold him reaching, after imminent perils, the borders of the foaming stream, and instantly casting himself into the waves broken with rocks. He reaches the opposite bank; and then, with the assistance of his bayonet and an iron hook, he digs his way up, as it were, an almost perpendicular wall of rock. The summit attained, he proceeds to fasten securely the end of a rope he had carried with him, of which *Gen Bethencourt* held the other end; this is then drawn tight, and the General, by way of example, swings himself by his hands from this rope, and thus passes over the abyss. The soldiers emulously follow, and one by one, each carrying his arms, his knapsack, and 60 rounds of cartridge, the whole body passed over in the same way. The detachment immediately took up the march, descending the mountains to the plains of Italy, and had the honor to arrive on the field of Marengo at the height of the battle, and in time to take part in and sustain the movement of *Desaix* which determined the victory.

* * * * *

Sauvan,

formerly Head Clerk in the Dep't of the Interior.

Gale Middleton, a novel, by the author of Brambletye House—2 vols., Philadelphia, *Carey, Lee & Blanchard.*

Horace Smith, in the hero of this new work, has struck out an original character, which he sustains, with a great variety of difficult scenes.

The insolence of fashionable "Exclusiveness," and the meannesses of the low ambition to be admitted within its precincts, are incidentally displayed with great force; but they will neither correct the one nor cheek the other.

The Farewell Address of Washington. New York: C. C. Wright & Durand.—The Xylographic Press of these artists has added another historical document to their series, executed in the same golden colors and finished manner as the Declaration of Independence and the Constitution of the United States, heretofore published by them. They have thus, in a convenient and ornamental form, furnished three documents, with which every American should be thoroughly familiar.

New Music.—The week has been prolific of new Music. From *Atwill's* Music Saloon, 204 Broadway, we have a *Set of Quadrilles*, arranged for the piano forte, from the *Pirata* by J. B. Duvenoy—*La Valse Tyrolienne*, from the opera of *La Fiancée*—"On the mountain high," a Tyrolese song, sung by Madame Otto, at Niblo's—"The Young Arab," a ballad, by Geo. Hargreaves.

From *James L. Hewitt & Co.*, 137 Broadway, we have "The Motherless," as sung by Miss Cawse and composed by C. A. Hodson. "The Mountaineer's Return," a Son of the Alpine peasants, composed and arranged by L. Devereaux. "Meet me by the Linden tree," a ballad, of which music and words both are by Geo. Linsey. "The Golden Girl, a ballad, sung by Mrs. Wood; and "The Dew Drop," a celebrated Rondo, sung by Miss Paton, Miss Stephens, and Madame Malibran, composed by C. E. Horn.

The pieces from Hewitt's are very handsomely got up, and each ornamented with an appropriate lithograph.

FOREIGN INTELLIGENCE.

One o'clock.—By the Columbia, Captain Britton, we have received London dates to the 28th July, from which we make the following extracts. No Liverpool papers have yet been received.

London, Monday, July 28.—Both Houses met on Saturday.

In the Lords, the Lord Chancellor took his seat on the Woolsack at 4 o'clock. Dingle and Lapworth, two individuals who have been in custody of the Sergeant at Arms, for refusing to appear at their Lordships' bar to give evidence on the Warwick Disfranchisement Bill, were brought up, and upon their undertaking to appear and give evidence whenever called upon to do so, they were ordered to be discharged upon payment of their fees.

It was then ordered that the Warwick Bill should be further proceeded with on Tuesday next, at 10 o'clock in the morning.

Soon after 5 o'clock, Mr. Charles Wood, accompanied by several other members of the House of Commons, presented the bill at their Lordships' bar. The Bill was received, and on the motion of Lord Melbourne, read a first, and ordered to be read a second time this day. Their Lordships then adjourned.

The Commons met at twelve o'clock.

Lord Althorp moved the order of the day for the third reading of the Irish Disturbance Suppression Bill. Mr. Reinayne, as an amendment, moved "That the Bill be read a third time that day six months."—After some discussion, the House divided, and there appeared for the amendment, 21; against it, 82.—The Bill was then read a third time.

Mr. O'Connell then proposed to insert in the Bill two clauses, to provide that nothing in the bill should be construed to prevent officers being tried by a civil tribunal for offences committed against individuals. A conversation of some length followed, and terminated in a division, when there appeared for the clauses 24; against them 69.

Upon the question that the Bill do pass, another division took place, when the numbers were for the passing of the Bill 60: against it 25. The Bill was then passed, and sent to the Lords.

The House then resolved itself into a Committee on the Stamp Acts, and leave was given to bring in a Bill to repeal the Stamp Duty upon Almanacks.

In reply to a question put by Mr. O'Dwyer, Lord Palmerston said the opinion of the Law officers of the Crown was that General Moreno was not amenable to any tribunal in this country.

The House adjourned at a quarter past Five.

Portsmouth, July 26.—The royal consort of Don Carlos, and her sister, (the Princess of Beira,) with the three children of Don Carlos and their household retinue, returned to their lodgings in this town on Wednesday afternoon. It is the intention of the royal family to take up their residence in this place or neighborhood until the portending political events in Spain shall decide them to fix upon a more permanent residence. We understand that if Don Carlos should prove unsuccessful in his present enterprize, he will embark in the Lulworth yacht, which has been provided for his safety. This vessel left Boulogne on the 6th instant, and is now cruising off the coast, between Bayonne and St. Sebastian.

We have received the Paris Papers of Friday.—The portion of their contents which is most interesting, is that which relates to Spanish affairs, and the progress of Don Carlos. The accounts given in the different journals are contradictory in the extreme. By some of them it is stated that the Prince continues to act with great caution, confining himself to the mountainous parts of the country, and studiously avoiding a descent into the plain to which General Rodil is most anxious to draw him. Other accounts represent him as proceeding in his enterprize with every prospect of ultimate success, and state that his agents are actively employed in the purchase of arms and ammunition for his service both in France and England. The *Indicateur of* Bordeaux says, "The report of an insurrection at Madrid, meets no credit here." The following is the only extract by these papers:

The *Journal de Paris* says:—'Don Carlos continues retired in the mountains, studiously avoiding a descent into the plain, where General Rodil wishes to draw him. No news of an engagement has yet been received. Letters received to-day from Rodil announce that he has taken all necessary measures, and expresses a confident hope of success.'

"Brussels, July 24.

Official.—"The King of Belgium having notified his acceptance to the Spanish Government, the Queen Regent of Spain has, by a special decree with the council of Ministers, recognized the Kingdom of Belgium, and appointed M. Chevalier P. L'Allemtaca Argaiz, Charge d'Affaires at Brussels.—[Moniteur.]

Brussels papers to the 24th instant were received last night. By the extracts which we have given below, it wil be seen, that up to the 12th instant Don Miguel was still at Turin, though his residence there was not expected to be of long continuance. His inclination, it appears, would lead him to Vienna, but doubts are entertained whether it would suit the policy of that Court to receive him at present. Should such be the case, he has determined to fix his residence at Rome. These papers contain no information on any other subject.

Joseph Bonaparte, the ex King of Spain, (under the title of Comte de Survilliers,) who with a part of his family and suite, have been staying at the Crown Inn, Uxbridge, some few days, and who has, together with his brother Jerome, taken the mansion of the late B. Way, Esq., Denham-Place, near Uxbridge, for a term of years, have left for that place, having waited the completion of some necessary repairs.—[Windsor Express.]

In relation to the British Post Office, it is stated in an official report, that in addition to the immense quantity of property passing daily through the Post Office, the amount of which it is not possible to estimate, and the numbers of letters constantly enclosing sovereigns and money (about 700 a day in and passing through London only) there are not less than 1000 letters annually put into the post *without any address whatever.* In many of these letters there are *valuable enclosures*, and in the course of a single year there have been above 100 letters of this description, which on being opened for the purpose of being returned to the writers, have contained property to the amount of between £20,000 and £30,000.

The quantity of tea, on which duty was paid in Great Britain for the year ending January, 1834, was 31,829,075 lbs.

According to an official return of the number of criminals in England and Wales, for the seven years ending with 1833, they amounted to 131,818.

The Russian journals give a statement of the present population of St. Petersburg. The number of male inhabitants is 291,290, and of females 153,845, total amount, 444,135. In this number, 1,968 are ecclesiastics, 38,894 belong to the nobility, and 47,548 to the army.

New Comet.—On the 8th of April, it is stated, Professor Gambart, at Marseilles, discovered a new comet, of a pale light color, with a diameter of four or five minutes. Owing to the state of the atmosphere, and its disappearance on the 13th, little has been ascertained of the stranger, except that on the 10th, 16h. 33m. 45s. sidereal time, its right ascension was 20° 9′ 7″, and the south declination 22° 33′.

Among the curiosities which M. Ruppel has brought from Abyssinia, are two remarkable manuscripts. One is a Bible, said to contain a new work of Solomon, one or two new books of Esdras, and a considerable addition to the fifth Book of Esther, all perfectly unknown in Europe. It also contains the Book of Enoch, and fifteen new Psalms, the existence of which was already known to the learned. The other manuscript is a species of code, which the Abyssinians date from the Council of Nice (324), the epoch at which it was promulgated by one of their kings. This code is divided into two books: the first relates to canonical law, and treats of the relations of the Church with the temporal power; the other is a sort of civil code. There are also some remarkable hymns, because they present the return of consonancy, the only feature of poetry to be found in Abyssinian literature.—[Galignani.]

Odessa, April 22.—Another valuable remnant of antiquity has been found at Kertsch. It is a magnificent sarcophagus of fine white marble, six feet in length, and twenty-seven in breadth. On the lid are two colossal figures; one is that of an old man, leaning on his left arm, and holding a half-unrolled paper. The other is a woman, on whose shoulder the old man rests his right hand. On the sides of the sarcophagus are several groups in alto-relievo.—Every part of the sarcophagus is of admirable workmanship, and proves that the artist must have lived when Grecian art was in its greatest splendour. Unfortunately it is not entire; but all the pieces belonging to it have found, so that it may be entirely restored.

There has been lately imported into France by a traveller of the name of Delangremer, a new fruit called "Nafe d'Arabie." It would appear that this fruit possesses tranquillizing and soothing properties, and that its medicinal use may be regarded as of high importance.

Pedestrianism.—On Tuesday evening, after a very heavy fall of rain, Coates, the predestrian, accomplished an extraordinary feat in Brown's grounds, at Brighton. He commenced by picking up fifty stones placed one yard apart in a straight line, and put each singly into a basket (the distance being nearly two miles); this he did in eleven minutes. He then walked a mile in seven minutes, wheeled a barrow one mile in eight minutes, walked backwards half a mile in six minutes, ran a pair of coach wheels half a mile in five minutes and a half, hopped 100 yards in half a minute, and lastly, jumped over twenty common hurdels five yards apart in one minute; the whole occupying fifty-seven minutes and a half. The match was stated to be for 25*l.*, and Coates was liberally backed. He has scarcely recovered from the fatigue he had undergone when he offered to bet 10*l.* to 5*l* that he completed a similar task the same evening within the hour. There was a very considerable concourse of spectators.

SUMMARY.

Long Island.—The farm of the Misses Stewart at New Ulricht on the Narrows, about nine miles from the city, and consisting of one hundred acres, was sold by auction last Thursday for $47,000. We understand *a city* is to be built upon it. The situation is very pleasant. The advance in real estate on Long Island, and on Staten Island, within the last year, has been very great,—[Jour. of Com.]

The notorious Cobbett has recently published—it is said, for we have not seen it—an address to the Irish, warning them of a purposed invasion of their country by the United States of America!

The Brattleborough Inquirer says—A gentleman from Dummerston, (Vt.) informs us that the drought is so great in that vicinity, that the grasshoppers are reduced to mere skeletons, and sit upon the fences, with tears in their eyes, for the want of something wherewith to satisfy the cravings of hunger!

Accident.—As a gentleman (Mr. Isaac Heard, of Charleston,) and his lady were on Saturday evening passing the Railroad in Newton, they were run over by the Worcester and Boston Railroad Locomotive Engine. Their horse was instantly killed, and the carryall dashed to pieces. Fortunately, Mr. Heard and his lady escaped unhurt. Mr. Heard was not aware of being in the neighborhood of the Railroad track. One of the cars was thrown off the road by the shock.

It will be found necessary, we suspect, for the safety of travellers on common roads, to require that whenever a train of railroad carriages approaches a point where the railroad intersects the common road, notice, by ringing a bell or blowing a horn, shall be given.

Quick Travelling and Cheap.—The steamboat *Champlain* reached the dock yesterday afternoon at 4 o'clock, from Albany; whence she started at 6 o'clock; and made all the usual landings. Time, 10 hours,—distance 150 miles,—price of passage 50 cents!

The Champion, opposition boat, was only about ten minutes behind.

[*From the Troy Daily Advertiser of yesterday.*]

Quick Passage.—The steamboat *Erie*, Capt. Benson, left the wharf at N. York, yesterday, at 6 A. M., and arrived in this city at 4h. 53m. P. M. She arrived at Poughkeepsie at 10h. 58m. A. M., and at Albany at 3h. 53m. P. M.; having performed the trip from New York to Albany—deducting the time lost in making 13 landings—in the short period of nine hours and one minute.

Rev. Dr. Bedell.—The religious community of Philadelphia, and the friends of religion generally, will hear with regret of the death of this eminent divine. He expired on Saturday morning, at Belmore, on his way to this city. He had spent a good portion of the summer at the mineral springs of Bedford, without receiving any essential benefit, consumption being, in fact, the malady by which he was finally swept from life. Dr. Bedell was a pure, noble minded, and highly intellectual man. As a clergyman, he was eminently popular; as a scholar, authentic in his taste, and rich in his attainments. In all deeds of charity and goodness he was pre-eminent. While the memory of his well-spent life remains, his name cannot cease to be cherished with a reverent affection by every lover of piety and talent.—[Philad. Com. Intel.]

Col. Don Vincent Bausa, Governor, ad interim, of the city of Matanzas, died at that place of apoplexy, on the 12th ult.

Emancipation in the British West Indies.—The following extract is from a letter received here today of the 12th ult., from the Island of Trinidad:

"Our island has been in the greatest uproar and confusion since the 1st inst. The negroes are flocking into town and refusing to work as apprentices under the new act for six years—the militia have been under arms for several days in succession, doing night duty also. About 100 negroes have been sent to jail for various terms of punishment, and many have been publicly flogged. They have at last consented to go to work; but I doubt much whether they wont break out every now and then when the whim takes them. Indeed one can hardly wonder at their discontent, for it cannot be denied by any one of common humanity and justice, that it is very hard, after being declared FREE, to be made apprentices for six years to learn—what? what they have been doing all the days of their lives.

We are all quiet now, and the militia have been dismissed for the present."

Considering the ignorance of the negroes, and the consequent incapacity to understand the terms on which they have been declared Free, it was not to be expected that the great and important change in their relation to those whom they had before served as masters, would be effected without some difficulties and disturbances: thus far, they have been fewer than we apprehended.

Since the above was in type, we have received by the Joshua Breenwood, Capt. Jackson, arrived here from Trinidad, "The Port of Spain Gazette" of the 8th instant, which says—"We are happy to say that tranquility has been restored in Port of Spain, and that accounts from the various districts throughout the island are satisfactory. There are two or three estates whose gangs are still about, and others which, although on the property, refuse to work; but these are solitary instances, and not sufficiently numerous to cause uneasiness."

Earthquake.—The same paper gives this account of an earthquake:

Letters received in town from Colombia, state that the town of *Santa Martha* (province of Ferra Firma) has been totally sunk by an earthquake. Water rushed over the site of the former town, and all the houses and inhabitants were engulphed.

Quarantine by Proxy.—The Charleston Courier says:—

"The steam packet *William Gibbons*, went to sea on Saturday night. The John Stoney, after having taken the passengers out of her that arrived from New York, took her place, and will perform the quarantine to which the W. G. had been subjected."

Amherst College.—The Commencement, on Wednesday, is said to have been of a highly respectable character. The number of strangers present was very great. The degree of A. B. was conferred upon thirty young gentlemen.

The day preceding Commencement, a discourse was delivered before the literary societies, by Gulian C. Verplanck of New York. This discourse is spoken of by those who heard it, as a very able and highly finished production.

The Degree of D. D. was conferred, we understand, upon Rev. George Redford of England; and that of L. L. D. upon Gulian C. Verplanck.—[Springfield (Mass.) Republican.]

[*From the Boston Commercial Gazette.*]

Harvard University.—At a meeting of the Board of Overseers, at the Council Chamber in Boston, August 25, 1834, the following resolutions were reported by a committee and unanimously adopted:

1. Resolved, That the students of Harvard University, have no just or equitable claim to exemption from prosecution before the civil and criminal tribunals of the commonwealth, for trespasses upon property, or against persons, whether belonging to the University or otherwise.

2. Resolved, That the proceedings of the President and Faculty of Harvard University, on the occasion of the recent riots and disturbances among the students at that Seminary, meet with the entire approbation of this Board.

3. Resolved, That the Circular published in the name of the Senior Class of Harvard University, relating to the recent riotous disturbances among the Students at that Seminary, is of a disorderly character, and entirely inconsistent with the station and duties of undergraduates at that University.

We are authorized to say, that on the above occasion, there was a numerous attendance of the Board of Overseers, and that every vote and resolution in relation to the above subject, was passed *nemine contradicente.*

We observe by the Boston papers of yesterday that the Annual Commencement was held as usual on Wednesday.

[*From the Philadelphia Herald.*]

Bank of the United States.—At the General Triennial Meeting of the Stockholders of the Bank of the United States, held at their Hall, in the city of Philadelphia, on Monday, the first day of September, 1834,

Robert Ralston, Esq. was called to preside, and Joseph Hemphill, Esq. appointed Secretary.

Nicholas Biddle, Esq., the President of the Bank, on behalf of the Board of Directors, submitted to the Stockholders, in compliance with the 13th article of the 11th section of the Charter of the Bank, "an exact and particular statement of the debts which shall have remained unpaid after the expiration of the original credit, for a period of treble the term of that credit, and of the surplus profits, if any, after deducting losses and dividends."

He also presented a general view of the present situation of the Institution, showing the statement of its liabilities and resources.

Whereupon, the following resolutions, moved by Joseph R. Ingersoll, Esq. were read, and unanimously adopted:

Resolved, That the thanks of this meeting be, and they hereby are, presented to the President of the Institution, and the Board of Directors, for the fidelity and skill which they have manifested in the management of the concerns of the Bank.

Resolved, That the Stockholders feel continued and undiminished confidence that the further administration of the concerns of the Bank, will be conducted with wisdom and zeal by those who have heretofore so satisfactorily directed them; and that the last resolution adopted at the triennial meeting of the Stockholders, held on the 1st day of September, 1831, which authorizes the President and Directors to make application for a renewal of the Charter, and to accept such terms of renewal as they may consider just and proper, is hereby revived and continued.

On motion of Richard Price, Esq. the proceedings of the meeting, signed by the Chairman and Secretary, were ordered to be published, and the meeting then adjourned.

Signed Robert Ralston, *Chairman.*
Joseph Hemphill, *Secretary.*

[*From the London New Monthly Magazine, for July.*]

SKETCHES OF HUMAN FOLLY.

Perhaps there is nothing less surprizing in the history of human weakness than the deep and painful belief in the existence of spirits, of a friendly and of a hostile character, which may be traced through almost every age and every climate. When a man is walking alone in the gloom of night, he feels that he has to trust to his mind for the light that is to conduct him on his journey. The outlines of his own frame are no longer visible to the eye, all outward objects assume a similar shadowy form, and between the optical illusions which are produced by darkness, and his alarm for his own safety, he recoils more and more upon the spirit that is within him for the succor of which he stands in need. Under these circumstances, it is almost unavoidable, unless he be endowed with a firm and well disciplined intellect, that being at the moment much more conscious of his etherial than of his physical nature, he should people the forest or the plains around with phantoms of every description.

One of the most extraordinary instances that have fallen within my notice so far as concerns the general faith in the existence of spirits, and consequently in the possibility of the dead returning again to life, is the story of Johannes Cantius, which was related to Dr. Henry More by a Silesian physician, and the truth of which cannot be disputed. I do not, of course, mean to express my belief in the tale that Cantius after his death appeared again in his native town; it is certain, however, that his townsmen were violently agitated for some time by rumors to that effect, and that these rumors were credited to a great extent throughout the whole province of Silesia.

Cantius was one of the Aldermen of the town of Pertsch, and bore a high reputation for integrity and good sense. The Mayor sent for him one day to assist in settling a dispute which had taken place between some wagoners and a merchant of Pannonia.

When the reference was brought to a conclusion, the Mayor invited Cantius to supper; the invitation was accepted. The supper, as usual in all mansion-houses, was excellent, and nobody enjoyed the feast more than Cantius, who frequently exclaimed, while he quaffed the Mayor's best Rhenish, "It is good to be merry while we may, for mischiefs grow up daily" Being obliged, however, to leave the party early, in consequence of a journey which he had to perform, he returned home, went to his stable, and ordered out one of his geldings. When the horse was led to the door, it appeared to have lost a shoe. Cantius lifted the leg of the animal to look at the hoof, when it gave him a violent kick in the stomach. He cried out immediately that he was a dead man, for that his interior was all on fire. He fell sick, and exhibited the greatest agony of mind, saying that his sins were so enormous that they could never be forgiven. This disclosure was so inconsistent with the general habits of his life, that no person could account for it, until by some means it was discovered, or suspected, that, with a view to secure his worldly interests, he had sold his soul to the Prince of Darkness. It was then remembered, though a prosperous man, his riches came to him very suddenly, and that a mysterious black cat was seen frequently in his company. The moment of his death was signalized by the commencement of an awful tempest, which raged at his funeral still more tremendously; but when he was buried, all was calm again, as if the earth had been relieved of the presence of some demon.

After he was buried, a rumor arose that a spirit was seen walking about on the premises of the late Alderman. The report received "confirmation strong" from the watchman of the ward, who deposed that he heard unusual noises in the house, as if persons were within it, throwing the furniture and everything else about in the most reckless manner. He added that the gates, which were carefully barred every night, were found wide open very early in the morning, although nobody was known to have withdrawn the bolts, or to have passed through the gates. The agitation of the scene extended even to the late worthy alderman's horses. They appeared in the morning covered all over with foam, as if they had been ridden vast distances during the night, and yet it would appear from the strange noises they made, that they had never been out of the stable.—The dogs performed their part in the general incantation, for they kept the whole town awake by barking and howling the night long in a most extraordinary manner.

A maid servant of Pertsch, who paid peculiar attention to the transactions that were going on, swore that she heard some person riding up and down the stairs on horseback, and galloping through the rooms. The house shook to its foundation, and she thought every moment that it would tumble about her ears. The windows were filled with flashes of lurid light. The new master of the house, not knowing what to think of the matter, went out one morning to explore the adjacent territory; snow was on the ground, and he clearly traced upon it the impressions of feet, which were neither those of a horse, nor the cow, nor of any known animal. But the alarm of the town became indescribable, when it was ascertained that Cantius had been actually seen by several persons riding up and down in the court-yard of his *ci-devant* domicile, and not only here, but also in the public streets, and along the neighboring vallies and hills, with a terrific rapidity, as if he had been chased by some infernal huntsman. The ground flashed with fire as he fled on his courser over the rocks and ridges of the mountains.

At one time Cantius was seen wrestling with an unhappy Jew, and torturing him with the most wanton ferocity. At another, a wagoner reported that as he approached the town, Cantius met him and vomited fire in his face. The parson of the parish was every night rolled backward and forward in his bed by Cantius, who did not leave him until he was quite exhausted. The parson's wife was treated in the same manner by Cantius, who usually penetrated through the casement in the shape of a dwarf. A boy's lips were found pressed together in such a way that he could not open them again. This was the work of Cantius. At a certain hour of the night, the candles burned with a dismal blue flame. It was the sure token of the approach of Cantius. Bowls filled over night with milk, were found empty in the morning, or the milk was turned into blood; old men were discovered in their beds strangled; the water in the fountains was defiled; cows were already sucked dry when the milk-maid claimed her usual tribute; dogs were seen dead with their brains knocked out, and the poultry disappeared—all these extraordinary occurrences were the doings of Cantius.

In the shades of the evening a head appeared looking out from the window of an old tower; suddenly it changed its form, and assumed that of a long staff, or a horrible monster—it was Cantius. In short, so numerous were the shapes which this unquiet ghost assumed, and such was the terror which he excited among the good folks of Pertsch, that travellers avoided the town, trade decayed, and the citizens were impoverished so much, that measures were at length taken for the purpose of ascertaining whether the alderman was dead or alive.—Accordingly, a body of the people proceeded to open his grave; all his neighbours non-existent who had been buried before or after him, were found to have undergone the usual process of "dust to dust," while the cuticle of Johannes was as soft and florid, and his limbs as supple, as if he had only just fallen asleep. A staff was put into his hand—he grasped it with the strength of a giant. His eyes opened and closed again. A vein in his leg was lanced, and blood issued from it in a copious stream. All this happened after Cantius had been reputed to have occupied his grave six months. An inquest was held on the body, for which there was a precedent in the case of a shoemaker of Breslaw, and the judges condemned the alderman to be burnt. But a difficulty still remained to be got over; for, with all the efforts they could make, they could not remove the body from the grave; it was so heavy. At length the citizens had the good luck to discover the horse which had killed Cantius, and, though the tug was tremendous, this animal succeeded in disinterring the remains. Another formidable obstacle to the absolute dissipation of the body remained to be conquered; it was placed over a fire, but it would not burn! It was then cut into small pieces, which were reduced to ashes, and the spirit of Cantius never appeared again! This is a very extraordinary story. But its preservation, and the minuteness with which it details so great a variety of circumstances, clearly show that, even if it had been wholly invented, it must have been, at all events, suited to the credulity of the age.

I have read many wonderful things about Ireland, in a strange legendary account of that country, which I have met with; but the tradition of the Laughing Skull possesses a sort of horrible drollery altogether unequalled. It is said that a comic actor or minstrel, by name Clepsanus, once flourished in that Island, who was the Liston of his time; his face was such a farce in itself, that any person, no matter how much oppressed by the most agonizing grief at the moment, who looked at him, found it absolutely impossible to avoid laughing. Having fretted his hour upon this stage of life, he made his exit, and was buried in the church-yard, where, in due course of time, all that was mortal of him disappeared save his pericranium. The grave-digger, while making room in the same spot for a new claimant, shovelled up the skull of the minstrel, and, without at all remembering to whom it had once belonged, placed it on a large stone that was on the surface of the earth. Some stragglers came into the churchyard, and happening to approach the said stone, they set up such a peal of laughter that the grave-digger was astonished. He looked about to ascertain the cause of their mirth, when his eye falling on that part of the caput, from which the mouth and tongue of Clepsanus had formerly set so many an audience in a roar, he too, yielded to the contagion, and laughed till he could dig no longer. The funeral train, for whose reception he had been preparing, next appeared, rending the air with that melancholy howl, which even yet may be heard in some parts of Ireland, on such occasions. But as the procession advanced, and reached within view of the skull of Clepsanus, the notes were suddenly changed to shouts of irresistible merriment. The tradition adds, that this singular relic might be seen even within a century or two ago.

The death of Henry IV. (assassinated by Ravaillac) placed not only the Queen, but I may add the interests of the kingdom, entirely in the hands of Galigai. Her ambition knew no bounds. Her husband was raised to the dignity of Marechal d'Ancre, and provided with a munificent income. Her apartments in the palace were soon crowded with courtiers of the first rank in the country. She had the insolence to shut her doors against them, whenever she chose to be relieved from their importunities. It was said that when she thus secreted herself, she was employed in incantations, the object of which was to preserve her influence over the Queen, and to render it immutable. The young King, Louis XIII., was one day playing in his apartments, which were near those of the Marechale. Disturbed by the noise, she went and told him that he must desist, for that the noise gave her the *migraine*. Outraged by heraudacity, the youth answered, that if his noise reached her chamber, Paris was large enough for her to choose another. This slight occurrence got bruited abroad, and conduced not a little to direct the tide of public opinion against both Galigai and her husband; they were hated by the King, the nobility, and the people.

Several persons, who evinced peculiar hostility to the two adventurers, died in a mysterious manner.—Their deaths were publicly attributed to the contrivances of the Marechale, to which her magical powers enabled her to have recourse. Concini was assassinated by the direct orders of the King. She heard the intelligence without a tear—without even the slightest emotion. But when she was informed that his body was exhumed and burnt as that of a convicted sorcerer, she trembled for the fate that impended over herself. She was ordered to the Bastile. Before she was removed from her apartments, they were plundered of every description of property which they contained,—her splendid furniture, her matchless caskets filled with jewels, and even of her wearing apparel,—under the pretence of searching for the instruments of her supernatural operations. She was obliged to appear before a commission specially appointed to try her. She was accused of being cognizant of the treason of Ravaillac, and of assisting him to carry his designs into execution.—But the principal charge against her was that of sorcery; and in proof of her guilt, certain letters were produced which were written by her secretary, addressed to a Jewish Physician named Montallo. It was deposed that after the arrival of this Italian Jew at Paris, the Marechale ceased to attend mass, and that she very frequently carried in her mouth small balls of wax, from which she divined whether her enemies were likely to die or live. It was further stated by her own coachman, that he had seen her sacrifice a cock in the church at midnight; and the Procureur-General cited several authorities from Hebrew books to show that this oblation was Jewish and Pagan, and could have had no other object in view than that of contributing to the magical ceremonies practised by the prisoner. It appeared also in evidence that the Marechale frequently expressed her repugnance to be looked at by particular persons, because they enchanted her, and that she was known to have often consulted Isabel, a famous sorceress at Paris in those days. Amulets were produced which she admitted to have worn, according to the common practice of the age, as preservatives against the powers of darkness; and several Hebrew books, which were said to have been

found in her cabinet, were brought forward as proofs of the illicit means which she had adopted in order to enslave the mind of the Queen. "My only sorcery," she nobly exclaimed, when interrogated on this point, "has been the power which a strong mind must always exercise over a weak one." She met her death with great firmness; the catastrophe was afterwards celebrated in a tragedy entitled "The Foreign Magician."

The manufacture of Brazen Men was at one period a favorite object of pursuit among the magicians of the continent. The best of these automata seems to have been the production of a celebrated Dominican friar, named Albertus Magnus, who was Bishop of Ratisbone in the twelfth century. He employed it as a domestic, and it was said that the image answered all questions put to it. This, of course, was an exaggeration. But certainly Albertus was no common practitioner in the art. Being desirous to pay his court to William, then Earl of Holland, from whom he wished to obtain a grant of a certain tract of land on which he intended to erect a convent for his order, he invited the prince to a magnificent entertainment. It was the depth of winter, the ground was covered with snow; nevertheless, the preparations for the banquet were made in the open air. When William and his retinue arrived at the place where the festival was to be held, they were astonished and much annoyed to find that they were to dine exposed to all the inclemency of the season. Albertus bore their murmurs with great complacency, and with some difficulty persuaded them to take their seats at the table. They took care, however, to wrap themselves in their cloaks, and to secure themselves against the cold as well as they could. No sooner were they seated than the snows melted away, the trees put on their summer dress, and were peopled with various birds that made the air resound with their melody. The ground was carpeted with fresh verdure, and a group of youthful pages splendidly attired appeared ready to wait on the guests, and viands and wines of the most luxurious description seemed self-arranged on the table. The sudden transition from winter to summer extended even to the skies, for the temperature of the atmosphere became so high that the prince and his followers were obliged to divest themselves of their cloaks and other superfluous garments. The change was enchanting beyond expression. The prince was delighted, and readily yielded the suit of the friar. The grant was no sooner made than the table and the beautiful pages vanished, the snow came down from the heavens in sheets, the song of the birds ceased, the trees again faded to their wintry aspect, and the guests, hastening to resume the garments which they had put aside, were very glad to betake themselves to the neighboring cottages for shelter.

The Emperor Jehangire, to whose curious autobiographical Memoirs I have already alluded, gives us an account of an entertainment which he received, very similar to that provided by Albertus, with this difference, that in the East the wonders of the scene were avowedly wrought by artificial means. He was proceeding in the winter season from Mandou to the province of Gujerat, when he was invited to spend some days at the villa of a nobleman near Ahmedabad, whose daughter was one of the inmates of his harem. The young lady was the director of the preparations on the occasion. "In the course of five days," says the emperor, "by employing various artificers of the town, to the number of four hundred individuals, in different branches of decoration, she had so effectually changed the appearance of the gardens, by making use of colored paper and wax, that every tree and shrub seemed as abundantly furnished with leaf, and flower, and fruit, as if in the very freshness and bloom of spring and summer. These included the orange, lemon, peach, pomegranate, and apple; and among flowering shrubs, of every species of rose, and other garden flowers of every description. So perfect, indeed, was the deception produced, that when I first entered the garden it entirely escaped my recollection that it was no longer the spring of the year nor the season for fruit, and I unwittingly began to pluck at the fruit and flowers, the artificers having copied the beauties of Nature with such surprising truth and accuracy You might have said, without contradiction, that it was the very fruit and flower you saw, in all its bloom and freshness. The different avenues throughout the garden were at the same time furnished with a variety of tents and canopies of velvet of the deepest green; so that these, together with the verdure of the sod, contrasted with the variegated and lively tints of the rose, and an infinity of other flowers, left altogether such an impression on my mind, as that in the very season of the rose I never contemplated in any place, garden, or elsewhere, anything that afforded equal delight to the senses."

Next to the extraordinary performances of the Indian wonder-workers, which I have already described, on the authority of Jehangire, we must rank those of the Bohemian Ziito. In Europe, his deeds of enchantment are altogether unequalled. When his royal master, Wenceslaus, was about to be married to Sophia, daughter of the Elector Palatine of Bavaria, a great number of Bavarian jugglers attended the court of the latter to Prague, to assist in giving variety to the amusements which were to follow the nuptials. The day for the grandest performances having arrived, Ziito was present. In personal appearance he looked like a satyr. His mouth reached from ear to ear; and his shaggy hair and deformed features gave him the aspect of a monster. Mingling with the crowd of spectators, he watched the tricks of the jugglers, until, at length, he broke out into a violent passion, and reproached them with the bungling manner in which they went through their exhibitions on so important an occasion. The principal performer repelled the attack of the Bohemian with similar violence of language; and the controversy seemed likely to give rise to blows, when Ziito, without any further ceremony, to the horror of the court, swallowed up his antagonist, rejecting only his shoes, because they were dirty! He then retired for a few minutes, and returned again, leading the magician by the hand, as if nothing had occurred between them.

But this was not all. Ziito then successively assumed the likeness of a variety of persons; now resembling one individual, now another. At one moment he appeared in the most ragged attire, in the next his garments were of the most sumptuous description. He flew, as it were, in the air; not, however, as if he were sustained by wings, but as if he were sailing in an invisible ship, rising and descending in with an undulating motion, without touching the earth; and all this without any apparent exertion on his part. The guests of the King were seated at the banquet; they put out their hands to help themselves to the dishes before them; in the very act their hands were converted, by the influence of Ziito, into cloven feet! He went down to the court-yard, where he appeared in a carriage drawn by cocks and hens. While the royal guests were crowding the windows to behold this exhibition, he planted the antlers of the stag on their heads. They could not withdraw from the windows; and he availed himself of the opportunity to apply to his own use the most dainty luxuries he could find on the table at which they had been sitting!

Ziito was at one time very much in want of some cash. He took up a few grains of corn, and metamorphosed them into as many hogs. These he drove to the house of a dealer in swine, to whom he sold them for ready money. He warned the dealer not to drive them to the river side for water—a hint which the man laughed at as a joke; but when he did drive them thither, the moment they touched the element the animals resumed their pristine character of grains of corn. The dealer, in a furious passion, sought out the enchanter all over Prague. At length he met with him in a shop, and charging him with the imposition which he had practised, demanded back the purchase money. Ziito, having no money in his purse, preserved a dogged silence. The angry creditor took hold of his leg to pull him into the street; the leg and thigh came away from the body of Ziito, who summoned his mutilator before a magistrate for the injury he had received. His worship was of opinion that the loss of the limbs was a fair set-off against the debt, and Ziito escaped the prosecution of his dupe.

It was currently believed in England, in the fourteenth century, that Raymond Lulli, a magician from Majorca, who was said to have gained possession of a philosopher's stone, and who was actually invited to this country on that account by Edward I., supplied that monarch with six millions of money, to enable him to carry on the war against the Turks. Lulli boasted little of his power of transmuting the base metals into gold. He said that his "great art" was a certain hidden faculty, by which he enabled any person to argue for many hours consecutively in the most logical manner, on any subject whatever, even though the party had never before paid the matter the slightest attention. Had Lulli flourished in our days, he would be an invaluable acquisition to many members of Parliament.

The art of transmutation was so fully believed in England in the fourteenth century to have been carried to perfection, that an act was passed in the fifth year of the reign of Henry IV., by which the manufacture of gold or silver from the base metals was made a felony! The ground solemnly alleged for the enactment of this law was the apprehension entertained by the commoners of those days, that if money were obtainable in this fashion, the King might supply himself with treasure *ad libitum*, without the assistance of Parliament, and so convert it to the purposes of despotism. The prevalence of a similar belief here, even late in the fifteenth century, is proved by patents which were granted by Henry VI., with a view to encourage researches in pursuit of the philosopher's stone!

My purpose in writing these papers is to show, that the extravagant fancies entertained by the men of former days were in a great measure the natural result of the mixed constitution of the human mind —fitted for existence here and for enjoyment hereafter. The yearnings of our ambition for that higher state to which we are destined, render us but too eagerly disposed to pursue any faint imaginary glimpses, which the intellect may catch of the invisible regions around us. But these impulses tend to convince us of the extensive ranges of conception over which the imaginations of man is permitted to wander, in order to prove, as it were, the incipient wings which are eventually to bear the soul to higher stages of thought, and a nobler sphere of action.—It was also my purpose, in re-producing the follies of the olden times, to compare them with some of these which we find prevailing in the present day, in order to show that however the object of pursuit may be varied, the average of wisdom and madness in every age of the world remains very much the same.

RAILROAD IRON, &c.

☞ Sealed proposals will be received until the 15th day of September next, for the immediate delivery thereafter at Suffolk, Va., of 250 tons of Railroad Iron in bars from 14 to 18 feet in length—2 inches wide by half an inch thick—pierced with countersunk holes ⅞ths of an inch in diameter, 1 foot or 13 inches apart from centre to centre; and for 16 tons of Spikes 4 inches long and ⅜ths of an inch in diameter. Specimens of the latter, and drawings of the rail showing the size and shape of the hole, shape of the rail, and angle of the scarf, will accompany each bid. WALTER GWYNN, Civil Engineer.

Engineer's Office, Portsmouth & R. R. R.
Suffolk, Va., August 18. a 30 3t

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phinehas Davis, patentee of the celebrated wire drilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a 30

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ½ inch,
200 do. 1¼ do. ⅜ do.
40 do. 1½ do. ⅜ do.
300 do. 2 do. ½ do.
800 do. 2½ do. ½ do.
soon expected.

Flat Bars in lengths of 14 to 18 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 tons of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2¼, 2⅜, 2½, 3, 3¼, 3½, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON,
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Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co, Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbonlale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

[For the New York American.]

LINES ON THE DEATH OF A YOUNG FRIEND.

How oft I've gazed upon this face,
And seen upon this brow, now cold,
Deep passions linger, and could trace
Where each in turn had left its mould.

And this, then, is the end of all
The hopes you fondly cherish'd—
All ended here in space so small—
And with thy youth have perish'd.

And this that I now gaze upon
Is doom'd to darkness and decay;
For Death in thee his work has done,
And ta'en thee from the cheerful day.

I'd mourn for thee, but that I know,
Thou had'st a hope beyond the tomb;
A hope that now does brighter grow,
A star amid surrounding gloom. R.

THE DEAD CHILD.

"She was my idol. Night and day to scan
The fine expansion of her form, and mark
The unfolding mind, like vernal rose-buds, start
To sudden beauty, was my chief delight.
To find her fairy footsteps following me,—
Her hand upon my garments,—or her lip
Long sealed to mine,—and in the watch of night
The quiet breath of innocence to feel
Soft on my cheek,—was such a full content
Of happiness, as none but mothers know.
Her voice was like some tiny harp that yields
To the slight finger'd breeze,—and as it held
Long converse with her doll, or kindly soothed
Her moaning kitten, or with patient care
Conn'd o'er her alphabet,—but most of all
Its tender cadence in her evening prayer,
Thrill'd on the ear like some ethereal tone,
Heard in sweet dreams.—
But now I sit alone,
Musing of her,—and dew with mournful tears
The little robes that once with woman's pride
I wrought, as if there was a need to deck
What God had made so beautiful. I start,
Half fancying from her empty crib there comes
A restless sound,—and breathe accustom'd words,
"Hush, hush, Louisa, dearest."—Then I weep,
As though it were a sin to speak to one
Whose home is with the angels.—
—Gone to God!
And yet I wish I had not seen the pang
That wrung her features, nor the ghastly white
Settling around her lips. I would that Heaven
Had taken its own like some transplanted flower,
Blooming in all its freshness.—
——Gone to God!
Be still, my heart!—what could a mother's prayer,
In all its wildest ecstacy of hope.
Ask for its darling like the bliss of heaven?"

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by
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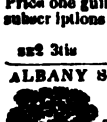

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The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

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Also, Flange Tires turned complete.

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INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Hearttе.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Hearttе—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m25

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf R M & F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street,
J31 6t corner of Maidenlane.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

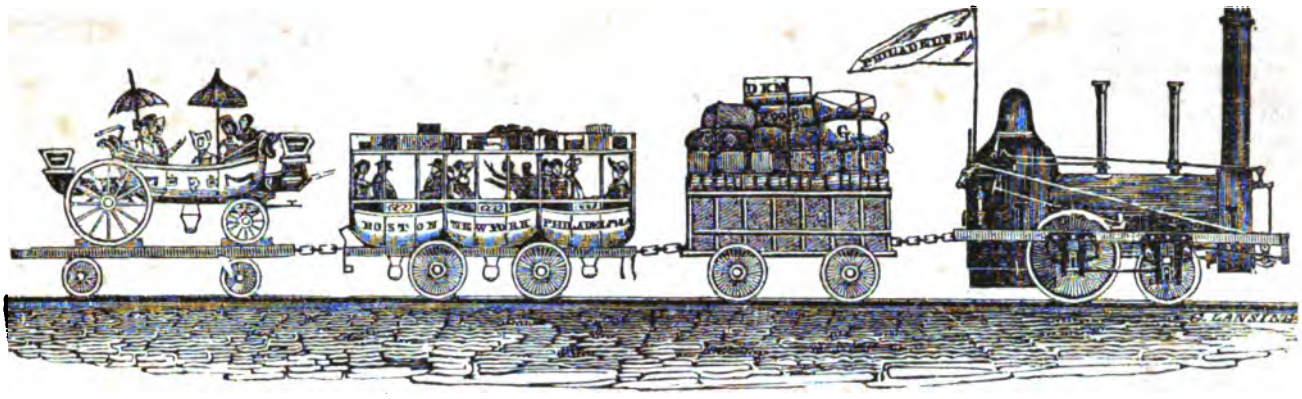
Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
m1 1y Germant. and Norrist. Railroad



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, EDITOR.] SATURDAY, SEPTEMBER 13, 1834. [VOLUME III.—No. 36.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, SEPTEMBER 13, 1834.

HUDSON AND ONTARIO SHIP CANAL.—The following communication came too late to hand for last week's Journal: we give it, however, although too late to aid in the object for which it was mainly designed.

Our views relative to the works to which it relates, are well known. Of the New-York and Erie Railroad we have often spoken: we have from its first agitation taken a decided stand in its favor, and shall not cease, while we live, to urge the importance of its early accomplishment, until we shall have taken an excursion on it to Lake Erie. Our opinion, however, of the importance of this road, and the obligation which we consider the State under to aid in its construction, does not prevent our feeling warmly interested also in the work named at the commencement of this article. We have had occasion, more than once, to speak of it; and we shall often hereafter refer to it, and do all in our power to promote its accomplishment—believing, as we do, most religiously, that to aid in such works, is to promote the happiness, improvement, and welfare of the great mass of the people, and that too without detracting a particle from the comfort of those not immediately benefitted by the particular work. With these views relative to the two most important works in this State, and, perhaps it may be said, in the United States, we are desirous to see the friends of each pursuing a conciliatory course, and where opportunity presents, aiding and forwarding the other. The friends of neither need be apprehensive that there will be a lack of business for them. No one who looks over the immense fertile country far west, which must, or rather will, if permitted, find a market in this city, will, we think, doubt the necessity and propriety of the adoption of early measures to ensure their completion, or entertain any apprehensions of their want of business to render them a profitable investment to the stockholders, or to the State, if constructed under its direction, as the canal should be; but the railroad should be managed by a company, the State contributing *at least one-third* to its stock, and of course receiving its share of the profits. Our reasons for this opinion are, that the establishment for transportation should also belong to the road, and not to a separate company, as then the whole would be managed together, and more harmoniously.

To the Editor of the Railroad Journal:

I perceive, Sir, by the newspapers, that a convention is to be held in the city of Utica, on the 11th inst., for the purpose of taking into consideration the importance of constructing a STEAMBOAT CANAL from Oswego, on Lake Ontario, to Utica, and eventually to the Hudson river. This, Sir, is a subject of vast importance to the city of New-York, as well as to Utica and Oswego, and must therefore be constructed at an early day, if our citizens desire to retain the present, and also to secure the rapidly increasing future trade of the great West.

The rapidity with which the fertile lands of Michigan, Illinois, and Indiana, bordering mainly on the great lakes, or rivers easily made navigable, are brought into cultivation, has seldom, if ever, had a parallel; and the ease with which a crop of wheat is raised on much of those lands, is unknown to, and can hardly be imagined by, those who have not visited them. It is not uncommon for a man who has the means, to put in 100 or more acres of wheat the first year of his residence on his new farm; much of which, perhaps most of it, being *prairie*, requires only a powerful team, with a sharp plough, after having burned the grass, to prepare it for sowing. Thus, you will perceive, Sir, that immediate cultivation of the soil will follow, and immense quantities of grain will be raised in that country, if a ready and cheap mode can be devised for transporting it to market. The important question, therefore, to be answered, is, how shall this be accomplished? I ask *how* shall a *direct*, *easy*, and *cheap* communication be opened between the Hudson and Mississippi rivers?

Will you allow me, through your Journal, to give my views, and at the same time to ask of those who have more intelligence upon the subject, and more leisure to investigate it, an expression of theirs through the same medium, that the public may be informed as to its feasibility and importance?

I would commence operations upon the section between Oswego and Utica, which might be completed by the time the Utica and Schenectady Railroad shall be ready for use, upon which and the present canal the trade of the lakes and the northern part of the State of of New-York will be accommodated, until there shall be time to enlarge the present canal from *Utica to the Hudson, and also to construct a Steamboat Canal around the Falls of Niagara*, thus opening a direct communication between CHICAGO and New-York, by which wheat may be transported, as I am informed, for less than 20 cents per bushel. By this arrangement we shall be prepared to intercept a good part of the trade of the upper lakes, passing through the Welland Canal; and which, unless so intercepted, when the present improvements in course of construction around the rapids of the St. Lawrence, with locks 200 by 55 feet, with 9 feet of water, shall be completed, will find its way to Montreal and Quebec.

To the city of New-York, Sir, I consider this work of great importance. To its inhabitants, then, but more especially to the owners of real estate, and to the MERCHANTS of New-York, would I address myself, and ask them to reflect one moment upon the interest they have at stake in the completion of this work. Let them not fold their arms, and say "we are sure of the trade we now have and also of its regular increase." Let them not rest easy until by their exertions they shall have effected the adoption of this important, and another *equally*, at least to a certain section of the State, important work—I mean, Sir, the NEW-YORK AND ERIE RAILROAD, a work of so much importance to the *southern* part of New-York, and, as it is now ascertained, of so easy accomplishment, as to demand a prompt adoption by our next Legislature—a work, Sir, *too long delayed*, when so loudly called for, and so much needed, by so large a portion of the State.

With the immense and rapidly completing works of Pennsylvania, on the one hand, and the progressing works of Canada, on the other, New-York must, indeed, be blind to her own interest, if she hesitates one moment in adopting and pushing forward these two grand works of improvement, which will place her *beyond competition* for the trade, at least, of the vast region of fertile country bounding upon the great "inland seas" of the west. *This*, however, is not all: complete *these* two works, and another of equal importance to New-York will follow—I mean from CHICAGO, on Lake Michigan, to the navigable waters of the Illinois river,

—thereby opening a direct and safe inland steamboat communication between New-York and New-Orleans of over 3,500 miles, and that too, with only about two hundred and seventy-five miles of canal, which may be estimated at probably not over $50,000 per mile, or $13,750,000—but a trifle more than New-York has already expended on her canals: an amount, Sir, which the city of New-York alone could without inconvenience furnish; and by so applying it, increase the value of its property by the increase of business from this source alone, over and above what it would be without it, more than double that amount. And, Sir, do I over-rate the enterprize and intelligence of the city of New-York, when I say, if permitted so to do, she would, at her own expense, construct this splendid work? I think not, and am therefore desirous to arouse those who are so much interested to the importance of taking part in the proceedings of the Utica Convention on the 11th—a period, by the by, very convenient for the subject, being the day after the meeting of the two political State Conventions, at the same place and at Herkimer, at which will undoubtedly be assembled delegates from every county in the State, and who may come prepared to take part in its deliberations.

A NEW-YORKER.

SHIP CANAL FROM OSWEGO TO THE HUDSON.—Our columns furnish the report of a Committee of the Chamber of Commerce, made some time ago, in relation to this magnificent project, and to the interest which this city in particular has in its accomplishment. No order has as yet been taken by the Chamber on the matter—meanwhile we ask attention to the statements and reasoning of the Report, and have only space to add here, that a Convention is to assemble at Utica on the 11th inst., (next Thursday) of delegates from the various counties, and from this city, more immediately interested in such an improvement.—[N. Y. American, of Monday, 8th inst.]

Report of the Committee of the Chamber of Commerce, upon the Letter of "the Corresponding Committee of the Citizens of the County of Oswego."

The Letter and Documents which were referred to us, indicate two projects of great importance to the nation at large, and especially interesting to the people of this State: the first proposes the *construction of a Ship Canal around Niagara Falls*, by means of which a communication will be effected between Lake Ontario and the upper Lakes. Vessels navigating Lake Erie and Lake Ontario can now approach within eight miles of each other, and the proposed work would not, probably, much exceed that length. We have no calculation of its cost, except an incidental assertion of the Committee of the Citizens of Oneida County, that a Canal, of sufficient capacity, to meet all the probable wants of our inland Commerce, can be completed for less than two millions of dollars: but, if the opinion of its importance which those gentlemen have expressed be correct, the question of expense is unworthy of the consideration of the Government of the United States, under whose superintendence it should be executed. We will briefly state some of the reasons which have been urged, why this should be a National Work.

1. The large number of States whose resources would be thereby developed, and their productions borne to a market with greater economy of time and money. New York, Pennsylvania, Ohio, Indiana, Illinois, and Michigan Territory, are all directly interested, being bounded in part by the chain of Lakes on our Northern frontiers; Kentucky and Western Virginia have an indirect interest in the project, through their communication with Lake Erie, by means of the Erie and Ohio Canal; and States more remote, by their artificial works and the means of communication which Nature has provided, would largely participate in that increase of facilities, and advancement of prosperity, which would result from the completion of this magnificent enterprize.

2. The chain of Lakes furnishes the natural and expeditious mode of communication with the Indians of the North-west. The removal of the chief impediment which obstructs their navigation, would enable the Government to give greater efficiency to its paternal zeal in favor of this unhappy race, and by bringing them nearer to the blessings of civilization and Christianity, change them from cruel foes or capricious friends into industrious and useful neighbors.

3. The inestimable importance of our having the command of the Lakes in the event of our being again involved in a war. If this work were constructed, all the munitions of war could be conveyed with so much ease and rapidity, that any point threatened with attack could be strengthened with little delay, and a single fleet would form the cheap and efficacious defence of our most extended and most valuable line of frontier.

4. The rapidity with which the industry and enterprize of the people of Canada, sustained by the rich rewards of a fertile soil, and encouraged by the munificent policy of their Government, is raising up a dangerous rival in our immediate neighborhood; dangerous in peace, from the numerous temptations and inducements which she offers to many of the most productive regions in our country to seek with her a market for the sale of their own products, and the purchase of foreign commodities; and in war, from her numerical force, increasing with wonderful rapidity, and from the position which she occupies in relation to us, a position which she is continually strengthening. From the Documents accompanying the letter referred to us, it appears that the emigration from the British Isles to the Canadas averages 50,000 annually; that, in addition to the Rideau and Welland Canals, several schemes of extensive intercommunication have been commenced; that the soil in general is extremely fertile; that, of the thirty steamboats which last year navigated Ontario and the St. Lawrence, only *three* belonged to ports on the American side; and, to use the language of a recent Memorial to Congress, "that, during the last five years, it has grown, in the resources of population and wealth, in agricultural improvements, commercial enterprize and industry, beyond what is known to have been accomplished within the same period in the most flourishing parts of our own favored country."

These considerations enforce the necessity of our acting with a liberal zeal, to counterbalance the exertions of so sagacious and enterprizing a rival; and if the Government of the United States should refuse to interfere, the project by which we shall at once be placed upon an equality with our competitor, and perhaps secure a superiority, is amply within the resources of our own State. When effected, the result will be that, instead of seeing the products of the most fertile portion of our Northern and North-western territory carried to Montreal, we shall have a large portion of our Canadian neighbors resorting to the market of New York, through the channel, the constructing of which is the second project suggested in the papers now under consideration.

This proposes to provide the means of passing vessels of from 100 to 200 tons burthen, from Lake Ontario to the Hudson, by improving the navigation of the Oswego River and Oneida outlet, making a navigable communication from the head of Oneida Lake to the Mohawk, and removing or overcoming the impediments which that river offers. The individuals recommending this measure are men of practical wisdom, who have long had the subject under consideration; and they confidently express the opinion, that a steamboat communication, by this route, between Ontario and the Hudson, would not cost more than two millions of dollars. An enlightened policy would induce our State to execute the work at ten times that cost, if we can credit the prophecy of Judge Wright, that "the completion of the Welland Canal, and of the Canal around the Rapids of the St. Lawrence, will secure to the Canadas one half of the trade of Ohio, Indiana, Illinois, and Michigan."

We have unquestionably derived great advantages from the Erie Canal, and we owe a large debt of gratitude to that illustrious man whose decision and energy created it; but it cannot be denied, that it has nearly reached the maximum of its utility, and that the resources of our industrious and enterprizing population require additional means for their full developement. Many bulky and heavy articles are excluded from the Canal by the rates of toll, and the number of these will continually enlarge, as the products of our skill and labor are increased. The great lumber counties lying along our Southern line are threatened with an entire exclusion, and are sometimes compelled to resort to the Baltimore market, over the Rapids and intricacies of the Susquehannah, instead of seeking that which habit and inclination would indicate. If a steam navigation were open from the city of New-York to Oswego, the numerous rivers and lakes which run through the central and Southwestern parts of our State, towards Ontario, would supply, with easy additions from Art, the means of junction with that Lake, which, upon the completion of *these two schemes*, would be the termination of an *inland sea*, having a greater circumference than the Euxine. The existing Canals, together with a Railroad through the Southern tier of counties, from the Hudson to Lake Erie, would bring all parts of the State, which are not immediately within the scope of the proposed improvements, into an expeditious and economical communication with the Atlantic. We shall then have done all that a liberal policy can suggest, to develope and improve the blessings of a bountiful Providence.

The limits within which we deem it expedient to confine this report, do not permit our entering into a detail of arguments and illustrations to support the opinions which we have expressed, nor do we consider ourselves called upon to recommend any immediate action by the CHAMBER OF COMMERCE; but, inasmuch as every question of internal improvements within our State is deeply interesting to all classes of individuals in our city, and in a particular degree to our merchants, we respectfully recommend the adoption of the following resolutions.

Resolved, That a Standing Committee be appointed to originate, receive, and answer communications of our fellow-citizens throughout the State, upon the subject of Internal Improvements.

Resolved, That the Secretary be requested to assure the Corresponding Committee of the Citizens of the County of Oswego, that this Chamber appreciates the public spirit which animates them,—concurs in opinion with them respecting the importance of the projects which they recommend,—and will cheerfully co-operate in attempts to conduct them to an early completion.

ISAAC S. HONE,
JOHN S. CRARY,
AUGS. WYNKOOP.

June 2, 1834.

INTERNAL IMPOVEMENT. — *Great Railroad from New-York to Washington, through Philadelphia to Baltimore.*—The continuous line of railroad which is intended to run uninterruptedly from New-York to Washington, through Philadelphia and Baltimore, is undoubtedly one of the most magnificent works of the present day, either in this country or in Europe. In point of extent it far surpasses any line yet possessing the slightest prospect of completion in the United States.

The series of railroads from New-York to Washington, under different charters, granted by different States, which combined into one continuous line, uniting the two large and all the intermediate cities in question, could be completed, *but for one obstacle*, in probably one year or eighteen months. This obstacle is the small section of 26 miles between Trenton and New-Brunswick, in New-Jersey; a section which is indeed under the operation of a charter for one of the old fashioned turnpike companies, but does not, *at present*, possess those powers of transportation and management which are necessary to transform it into a railroad.

We have procured from the best sources of information a full and accurate statement of the present condition and prospects of the whole series of these railroads, which, combined, will bring New-York and Washington within eight hours distance of each other, and of course, all the intermediate cities in like proportion. This information is so interesting that we cannot deny ourselves the pleasure of communicating it to the public.

And first, the railroad from Washington to Baltimore. The length of this section is 37 miles, being a branch of what is called the Baltimore and Ohio Railroad, chartered under the joint powers of Congress, and of the State of Maryland. This road is now in the process of construction. A large section is finished, and it is believed that it could be completed in less than a year.

2. From Baltimore to Port Deposite Bridge on the Susquehannah. This section is also chartered by the State of Maryland—the stock subscribed, the route surveyed and located, and could be put under contract and finished with great expedition. The road is nearly straight and very level—the only exception being a very small sweep up Port Deposite Bridge. Length of this section 41¼ miles.

3. From Port Deposite Bridge to the Maryland and Pennsylvania line — distance 10 miles. This section is also chartered, the stock subscribed, route surveyed and located, and only waits the action of the New-Jersey Legislature upon the Trenton and New-Brunswick section.

4. From the Maryland and Pennsylvania line to the Columbia Railroad, near Coatesville,—distance 20¼ miles. This section is also chartered, surveyed and located, being in the same situation as the two preceding sections. From Coatesville to the Susquehanna, the ground is particularly well adapted for a railroad. The line laid out runs along a gentle ridge, almost level the whole distance till it descends the bank of the Susquehanna. The ground resembles the famous ridge road of Western New-York.

5. From Coatesville on the Columbia Railroad to Broad street, Philadelphia,—distance 45½ miles. This is now in use. Not a word need be said of this section to a Philadelphia reader. It is crowded daily with passengers.

6. From Broad street, through the Northern Liberties, &c. to the Delaware river, distance one mile. Nothing need be said of this short cut.

7. From Philadelphia to Trenton Bridge,—distance 26½ miles. This section we have already described. It is nearly completed, and will be ready for the locomotive before the termination of the season.

8. From Trenton Bridge to New-Brunswick,—distance 26¼ miles. This is the only section throughout the whole line, from Washington to New-York, that is not chartered for a railroad. It is the condition of this section in which exists the whole obstacle to the completion of a line of railroad that would confer lasting benefits on the whole Atlantic seacoast—but of this, more anon.

9. From New-Brunswick to Jersey city, opposite New-York,—distance 30¼ miles. This section will be completed and ready for trade next year—more than half will be ready this season.

Thus, at one view, we have a continuous line of railroads through the whole route from New-York to Washington, a distance of 239½ miles, including the breadth of the North River, that could be constructed and made ready for travelling in about a year from this date, provided the Legislature of New-Jersey would remove the only obstacle that stands in the way of such a magnificent improvement.—[Phil. Inq.]

Report of the Chief Engineer to the President and Directors of the Baltimore and Port Deposit Railroad Company

Baltimore, March 29, 1834.

To the President and Directors, &c.:

Gentlemen,—At the commencement of the present year I had the honor of receiving the appointment of your engineer. In obedience to instructions accompanying the announcement of my election to that office, I set on foot as soon as practicable, a survey, the completion of which on the last day of February has enabled me to submit to you the following report. This survey, a plan and profile of which I herewith present, was made with all the rapidity consistent with a proper regard to accuracy in the field operations, as I was given to understand that it was important that I should lay before you its results at an early day, in order that application might be made to the Legislature of Maryland during its late session, for aid in the prosecution of the proposed work. Much exertion was made to accomplish this object, but without success, as the session terminated too soon after the completion of the surveys to allow time for the preparation of the necessary estimates and drawings. While I regret that the wishes of the Board could not be gratified as to the time of the presentation of the Report and map, I am glad of the opportunity which the delay has afforded, of rendering both of them more fully illustrative of the subject to which they refer.

In explanation of the map, I will describe the principal characteristics of the route which has been surveyed. The intersection of Boston and Hudson streets, near the margin of the Patapsco, a short distance west of Harris' creek, was selected as the point of commencement. From thence two lines were traced, one of them crossing the arm of the Patapsco just without the mouth of the creek, and pursuing the middle of Boston street to the eastern boundary of the city upon the shore of the river, passing close to the Mansion House Tavern, and turning to the left with a curvature of 2100 feet radius, until the Trap road is crossed; ascending thence the valley of O'Donnell's Run, east of the Canton race course, by a straight line, to the summit dividing that run from a drain of Harris' creek; then turning to the right by a curvature of 2300 feet radius, until a point is attained opposite the buildings forming the Orange farm improvement. This route is here joined by the other, which, proceeding from the starting point above described, occupies the middle of Hudson street to the bridge over the mouth of Harris' creek, where it begins to deflect to the left by a curve of 500 feet radius, and follows the bluff and serpentine eastern bank of that creek by a series of curvatures, of radii from 7 to 1200 feet, till, leaving the steep shores of the stream, it ascends by a line of very gentle flexure the favorable slope of that drain of it which heads at the Orange farm, uniting with the line first described near the farm buildings, about a quarter of a mile from the Philadelphia turnpike. Of the two lines, the Boston street route is the longest by half a mile, but has much the advantage in point of curvature, besides being recommended by other considerations of which the Board are already aware; the estimate has therefore been made upon it. From their point of re-union, the single route thence pursued descends a drain tributary to Black River, by a line partly straight and partly curved, with radii of 17,000 and 10,000 feet, crossing the North Point road near its own level, and lying upon ground in which moderate alternate cutting and filling is required. The tide-water of Back River is then crossed, near the residence of General Stansbury, the width of the crossing, which is somewhat oblique, being 900 feet, and the level of the road assumed at 18 feet above medium tide. The route now conforms to the course of Northeast Creek, whose banks are bluff, and broken by inlets, from the tide receding to various distances from the general line of the margin of the creek. This part of the profile, therefore, presents a rough aspect, though the cuttings and fillings are neither very long nor deep; numerous culverts will be required on this portion of the line. The principal branch of Northeast Creek is now crossed in the vicinity of Mrs. Stemmer's mill, a little to the left of which the line passes, and along the north side of the mill-pond, ascending a drain supplying the pond, and crossing a ridge between it and a drain of Middle River, about half a mile north of the meeting house. This ridge is the highest ground encountered between North-east Run and the Gunpowder. The route then crosses several other drains of Middle river, the dividing ground between which is in every instance of moderate elevation. The last of these drains being passed near the termination of a range of highlands called the Blue Hills, separating the waters of Bird River and Middle River, the route soon after reaches ground sloping towards Bird River, which lies to its left, and crosses two or three of its small tributaries, traversing for a considerable distance the extensive and finely cultivated tract belonging to Robert Oliver, Esq. and attaining the bank of the Gunpowder at a point about three quarters of a mile to the left of his mansion. The Gunpowder is now crossed from Cedar Point to Caldwell's Point, between which its width is one mile, and its depth from 5 to 8 feet. From its eastern bank the line ascends a shallow ravine, passes a low summit, and, avoiding an inlet from the river which is encountered a little beyond the head of that ravine, ascends towards the dividing ground, separating the waters of Gunpowder and Bush rivers. This summit being attained, a descent towards the latter river is commenced, and the route reaches it after passing over ground of a favorable character, crossing two small streams running into Bush River, and approaching its western bank along the easy slope of Dulany's Creek. The width of Bush River at the place of crossing is one mile; above the mouth of Dulany's Creek the width is not more than three quarters of a mile; but it is questionable whether the approach to the west bank of the river, at the last point, would be as favorable as that of the line surveyed. A comparative location of the two routes connected with the two crossings, can alone determine this question. On arriving at the east bank of Bush River, the depth of which is from 6 to 8 feet, the ground is found to rise rapidly from the beach, and a cutting, whose extreme depth is 17 feet, must be encountered for about half a mile; after getting through which the route reaches the gently undulating ground dividing the waters of Church Creek from those of Sod Creek, or Beaver Dam. To the surface of this ground the road-bed may be so closely accommodated, for a distance of about four miles, as to render the graduation very cheap. No stream is crossed in this distance, and consequently no masonry will be required. About two miles west of Swan Creek the hollow of Beaver Dam Branch is passed, beyond which an immediate deflection to the left becomes necessary to accommodate the high ground between those two streams. A pretty favorable pass through this ridge is found near to Hall's Cross Roads, on the post road to Havre de Grace, where the route bends again to the right for the purpose of occupying a ravine which affords the only advantageous approach to Swan Creek, whose banks are of the most irregular and precipitous character, indented by deep coves, and rising almost vertically from the water to heights of 40 and 60 feet. The part of the line connected with the crossing of Swan Creek will be costly, on account of the great difference of level between the ridge at Hall's Cross Roads and the waters of this creek, and the short distance between them, which make it necessary to cut deeply into the ridge, and embank to a considerable height upon the creek, in order to obtain a grade of moderate inclination. Ascending from the tide of Swan Creek, the route again assumes the most favorable character; and crossing several tributaries of that creek and the Susquehanna, it reaches the latter by a line of direct course and gentle undulation, leaving the town of Havre de Grace about half a mile to the right, and striking the river at the base of the highlands which form its border. From its encounter with the Susquehanna, the survey passes over ground of a character totally opposite to that which it has hitherto traversed. The tide washes the bottom of the rugged hills which confine the river, leaving at high water no beach at their base. It will therefore be necessary to cut the road out of the steep declivity of the banks, pursuing the windings of their coves, and rounding their prominent points of rock by curves of short radii. A considerable quantity of rock must be excavated upon the first two miles of this part of the route; it will blast well, however, and much of it may be removed by the crowbar, as it lies in loose masses, unconnected but by their weight. After passing these two miles, the river banks become of easier slope, and less stubborn material, and the west end of the Port Deposit bridge may be reached

without much further difficulty or expense. The best mode of getting upon the bridge will furnish matter for deliberation, and may be attended with some inconvenience, as, from the confined character of the adjacent ground, the axis of the bridge must be at right angles to the line of the railroad, till within a very short distance of their meeting. In the crossing of the bridge by the railway, it will be necessary to raise the surface of the islands dividing the different sections of the structure, to a level with its flooring, and provision will probably be demanded for strengthening it to bear the heavier burthens it will be required to sustain, compared with those which have hitherto passed over it. The conveyance of the road down the Susquehanna to a junction with the foot of the inclined plane terminating the Oxford Railroad, and to a connection with the town of Port Deposit, will be managed with sufficient facility. The survey terminates in that town at a point opposite the Methodist church.

In addition to the line actually surveyed, the map exhibits a view of several collateral routes which were examined, and which, in the location of the road, would demand attention. A particular description of them is considered unnecessary, as their characters will appear from an inspection of the drawings.

I will now present an estimate of the cost of the different parts of the projected work, under the several heads of the graduation, masonry, pile bridging, and railway.

THE GRADUATION.

The excavation and embankment upon the 35¼ miles of the route from Baltimore to the Susquehanna, has been calculated with considerable exactness, and the line between those points is divided for the convenience of the estimate into 26 sections of various lengths. Upon the 5½ miles from where the route touches the Susquehanna, to Port Deposit, no sufficiently precise computation of the quantity of material removed in the formation of the road-bed could be made, in consequence of the rugged nature of the ground embraced in that part of the survey, over which, in the brief time allowed, a location could not be made as a basis for the necessary calculations. This latter part of the route will therefore be estimated separately, by comparison with other ground of a similar character, on which railroads have already been constructed. A near approach to the cost of graduating the entire line will thus be obtained, notwithstanding the approximate nature of the latter part of the estimate. The first section begins at the boundary of the city of Baltimore, about three-quarters of a mile from the starting point of the survey. This distance within the city it was thought best to consider by itself, as its graduation might be made under circumstannot affecting that of the rest of the line: it is therefore called the "city section." In stating the quantity of earth removed, no distinction is made between excavation and embankment, for the sake of greater simplicity.

[The tabular statement of the details of the estimate, showing the lengths of the sections, the number of cubic yards in each, the cost per cubic yard, and the entire cost, is omitted, and the general results presented as follows.]

The united length of the 26 sections above specified is 32 miles 2581 feet, upon which the aggregate quantity of earth to be removed and supplied is 599,829 cubic yards, at an average cost per cubic yard of 21 $\frac{9}{10}$, cts. making the total cost equal to the sum of $126,099 20, which, for the above distance, is at the average rate of $3881 31 per mile for the removal of the earth alone. About 10 miles of the route passes through timbered land, the clearing of which for the necessary breadth may be estimated at $250 per mile, or for the whole distance, $2500, which, added to $126,099 20, makes $128,599 20, or per mile $3,958 26.

The cost of graduating the part of the route which pursues the precipitous bank of the Susquehanna, from the end of the 26th section to the bridge, and thence to the town of Port Deposit, I have approximately estimated as follows, guided by a comparison of the ground in question with a hill side of a similar character occurring in the ravine of the Patapsco, upon the route of the Baltimore and Ohio Railroad.

7000 feet at the rate of	$2	50 per ft.	$17,500
6500 " "	1	00 "	6,500
14780 " "		50 "	7,390
28280 feet graded for the sum of			$31,390

at the rate of $5860 06 per mile.

Upon the city section the quantity of earth to be removed is estimated at 18,385 cubic yards, which, at an average of 15 cents per yard, will cost $2757 75. A part of the line within this section crosses an arm of the Patapsco. No estimate is offered, however, for the necessary bridging, as I considered it probable that the improvements now in progress under the direction of the Canton Company, would embrace the extension of their water front along the line of Boston street, so as to provide a foundation for this part of the railway.

Upon a recapitulation of the several parts of the estimate, it appears that the cost of the graduation for the entire distance of 41 miles 1323 feet, or 41¼ miles, will be as follows:

	Distance.	Cost.
From the city boundary to the Susquehanna,	34.2485	$128,599 20
From the end of the 26th section to the Methodist Church in Port Deposit,	5.1880	31,390 00
City section,	.3847	2,757 75
Totals,	40.2932	$162,746 95
For superintendance and locating curves, add 10 per cent.,		16,274 69
		$179,021 64

From which, for the whole distance, including the length of the Susquehanna Bridge, 3671 feet, is deduced an average cost per mile of $4,339 91.

THE MASONRY.

The numerous small streams intersecting the line of the survey will be passed by rectangular culverts constructed in the most economical manner. With the exception of the tide rivers, there are but three streams requiring bridges, the principal branch of North-East creek, at Mrs. Stemmer's Mill, Swan creek, near the head of its tide, and Wilton Run, a considerable branch of the latter. These three bridges will consist of stone abutments, with superstructures of wood. The masonry they will require will be included in the statement I will proceed to give. The cost of the superstructures will be stated separately.

[The particulars of the quantity and cost of the culvert and bridge masonry upon each of the 26 sections are omitted, and the aggregates alone stated, as follows.]

The total number of perches upon the 26 sections, from Baltimore to the Susquehanna, is 7,302, the average estimated cost of which per perch is $4 27$\frac{3}{10}$, making the entire cost equal to $31,201.

The two small bridges over Stemmer's Run and Wilton Run, are allowed a space of 15 feet each, which, at the rate of $10 per running foot for their flooring, will make their cost $300. A space of 100 feet is proposed for the passage of Swan creek, by a frame upon the plan of Col. Long, costing $15 per foot linear; making the cost of the superstructure of this bridge $1500. Adding these items to the cost of the masonry, the result will be thus, for the 26 sections:

Total cost of culvert and bridge masonry,		$31,201 00
Wooden superstructures for three bridges,	1,800 00	
		$33,001 00

For the part of the route along the Susquehanna, the masonry required will be nearly thus:

18 culverts at an average of $100 each,	1,800 00
Bridge over Steele's Run, at junction with Oxford Railroad,	300 00
	$35,101 00
Add 10 per cent. for contingencies and superintendance,	3,510 10
Entire cost of masonry upon 41¼ miles, being $936 03 per mile.	$38,611 10

In estimating the quantity of the masonry, I have allowed large vents for all the streams crossed by the route. It may, in the construction of the road, be safely practicable to reduce the size of many of the culverts, and in no case do I think an increase in their dimensions will be required. I have been aided, in fixing their cost per perch, by a knowledge of the contract prices for similar structures upon the lateral railroad to Washington, which passes through a country affording about the same facilities for procuring materials as those which exist upon the route to Port Deposit, excepting the portion of it along the Susquehanna, where stone may be procured immediately on the line at the least possible expense.

THE PILE BRIDGES.

In order to effect, at a reasonable expense, the passage of the wide inlets of the Chesapeake bay, which are crossed by the route, it is obvious that the above description of bridge must be resorted to, being manifestly cheaper in its construction than any other structure of wood, stone, or other material that could be devised. The great width of the Gunpowder and Bush rivers would preclude the employment of any mode of crossing them, other than an economical one. This species of bridge, in its simplest and cheapest form, consists of a succession of rows of piles supporting the roadway, each row containing only a sufficient number to sustain the vertical pressure of the flooring and its load. Where the structure is not subjected to shocks from ice or drift wood, the rapid current or violent agitation of the water, this form has sufficient solidity But it would not be proper to leave the bridges which it is proposed to throw over the rivers in question unfortified by precautions against the shocks just described, which, in the Gunpowder particularly, will at times take place, especially at the breaking up of the winter, when considerable bodies of ice and timber urge their way outwards to the bay. I have therefore provided, in the design which I submit, for the security of the bridges against accidents, even at the expense of a considerable augmentation in their cost. The details of the estimate of this part of the work are as follows. The rows of piles are supposed to be driven at intervals of 12 feet. The cost of that number of feet in length of the proposed bridge is therefore exhibited.

1 cap piece, 22 feet long, 10 by 12,	$2 64
4 pieces scantling, 5 by 52, 48 feet linear,	3 60
2 joists, 3 by 12, 24 do.,	86
Bracing for piles, 4 by 8, 60 do.,	1 92
Two-inch plank for flooring, 576 feet board measure,	5 76
Hand railing, 100 feet do.,	1 00
Horizontal timbers bolted to piles at low water mark,	2 70
10 iron bolts, ⅝ inch square, averaging 3 lbs. each, at 7¼ cents,	2 17
18 lbs. spikes and nails, at 6 cents,	1 08
6 piles averaging 30 feet long each, 180 feet run, at 7 cents,	12 60
Driving piles, at $1 50 each,	9 00
Workmanship to superstructure exclusive of the railway,	12 00
Cost of 12 feet in length of the bridge, being $4 61 per foot.	$55 33

When the location shall have been established upon the most favorable line, the lengths of the several pile bridges will be thus:

Back river,	900	feet
Gunpowder,	5,900	"
Bush river,	3,800	"

Aggregate length of pile bridges, 10,000 feet which, at $4 61 per foot linear, will show their entire cost to be - - - $46,100
Adding 10 per cent. for contingencies and superintendance, - - 4,610

$50,710

For this sum it is believed that a stability may be given to these bridges which will secure them from those accidents against which it is of such great importance to guard them, as their destruction or serious injury by ice or drift wood, by breaking the continuity of the railway, which they contribute to support, would stop the transit upon the entire line.

THE RAILWAY.

In the construction of the first track, I would recommend the adoption of the cheapest plan upon which a railway could be built sufficiently firm to withstand the action of the probable transportation over it for 5 or 6 years after its completion. Within this time, by the aid of the first, a second track may be laid down of a more permanent and perfect description. In this way the immediate outlay upon the work would be made as small as possible; and opportunity be afforded to test the value of the projected road as an investment of capital, to construct the second track in the most economical manner, and to apply to it any improvements in the form of railways, which may, in the mean time, be discovered. In the folowing estimate I have pursued the principles just expressed. It is proposed to obtain the timber of which the railway will be constructed, from the country adjacent to the line of the road, and no difficulty in procuring the required quantity is anticipated. The railway will consist of oak logs of dimensions confined within certain limits, supported by sleepers eight feet apart; the sleepers and intermediate parts of the logs resting upon the earth; the iron rail bearing upon the longitudinal sills properly hewn for the purpose.

ESTIMATE.

11,000 feet linear of oak sills, hewn upon the upper and under sides, delivered on the road at 7 cents per foot, - - - - - - - -	$770
675 oak sleepers delivered in a rough state upon the road, at 30 cents each, - - - - -	203 50
760 plates for the joinings of the rails, at $33 92 per thousand, -	25 78
1,000 lbs. 4½ inch spikes, at 9½ cents per lb. - - - - - -	92 50
Small nails for plates, - - -	3 58
Transportation of 23 tons iron, by water and land, at $3 per ton, -	69 00
Workmanship of a mile of single track, - - - - - -	750 00
Dressing off the road bed and opening drains, - - - - -	50 00
Local superintendance in pay of contractor, - - - - -	100 00
Contingencies 7 per cent., $144 44— superintendance 5 per cent. $103 17	247 61
22 37/100 tons bar-iron rails, 2¼ inches broad, ¾ inch thick, at $45 per ton,	1,006 65
Cost per mile of single track,	$3,317 62

For the entire distance of 41¼ miles the cost of a single track will therefore amount to $136,-851 82.

Allowing for the above distance of single track 3¾ miles of a second track, laid down at the same time with the first, and to be used for the accommodation of trains passing each other, or stationary at depots, and for the reception of cars employed in repairs, we have a length of 45 miles of single track, which, at the above rate per mile, will cost - $149,292 90
Allowing 25 turnouts for the whole length of the line, at $110 each, 2,750 00

Entire cost of 45 miles of single railway, - - - - - $152,042 90

RECAPITULATION.

The several items of the foregoing estimate being brought together, present the following result as the entire cost of the work:

Graduation with 10 per cent. added for contingencies, - -	$179,021 64
Masonry with do. do. - -	38,611 10
Pile bridging with do. do. -	50,710 00
Railway and contingencies, -	152,042 90
	$420,385 64

Being for the distance of 41¼ miles, at the rate of $10, 191 17 per mile.

In addition to this sum to be expended in the construction of the road, a further outlay for putting it into operation will be required immediately after its completion, which may be estimated nearly as follows:

4 locomotive engines with their tenders, at $4,000 each, - - -	$16,000
10 passenger coaches, at $600 each,	6,000
50 transportation cars, at $150 each,	7,500
Depots, water stations, car houses, &c., cheaply built, say, - -	5,000
	$34,500

With this addition to the cost of constructing the road, the capital to be expended before any of the advantages of the project can be realized, will be $454,885 64.

The business of the road could indeed be commenced with a rather less costly establishment than the one above estimated: but if the anticipated success attend the work, the sum of $35,000, at least, must be laid out within the first year from its completion, and may therefore be regarded as a present expenditure.

CONCLUDING REMARKS.

Having gone through the preceding details, I respectfully submit their results to you with a few further observations. The encouragement to the prosecution of this work is undoubtedly great. As its projectors, you are well acquainted with the advantages in point of trade and travelling which it will be likely to secure, whether as a part of the great inland thoroughfare from north to south, or in its connection with the valley of the Susquehanna. A work holding out such prospects of profit to its proprietors would justify a large expenditure in its construction. Its estimated cost must, however, be admitted to be moderate, when compared with that of a majority of the railroads hitherto constructed; for when completed, with a second track, its cost will not probably exceed $15,000 per mile. The annual charge for repairs to the graduation must also be small, on account of the inconsiderable depth of the excavations and embankments, which, neither by slips or settlements, will give rise to expense in their removal or supply, or interruption to the use of the road. And yet, this economy in the first cost and subsequent repairs is consistent with the employment of ascents and curvatures of as favorable a character in respect to the moving power and speed of transit, as those which are used upon the Lateral Railroad to Washington, and the advantages of which upon that road have only been obtained by a most costly graduation. It should be a subject of particular congratulation to this Company, that they are enabled to impart to their work those valuable characteristics of gentle ascents and curvatures, inasmuch as by means of them they can compete upon more equal terms with the water carriage from the Susquehanna, and transport the United States' mail with a rapidity as great as that with which it will be conveyed upon the Washington Railway.

In concluding this report, it is with much pleasure that I acknowledge the value of the aid I have received in the survey upon which it is founded from Messrs. H. R. Hazlehurst, Hopewell Dorsey, and James Murray, who executed the field and office duties under my direction. By their industrious and well directed efforts, the surveys were completed in about seven weeks after their commencement, although conducted in mid-winter, and for a part of the time during the prevalence of very inclement weather. The aggregate length of the lines run was about 50 miles, 7 of which were traced with the precision and care of a definitive location. From the experimental survey previously executed by Messrs. Poppleton, Dawson, and Isaac Knight, as far as the Gunpowder River, I derived assistance in conducting the line to that point in the route, and the general map of the country between Baltimore and the Susquehanna, made in illustration of the reconnoissance of the Messrs Shrivers, also yielded me some useful information.

With great respect, I remain, gentlemen, your obedient servant,

BENJ. H. LATROBE.

DIVIDEND.—The Saratoga and Schenectady Railroad Company have declared a semi-annual dividend of four per cent., payable on the 22d inst.

The nett profits of the Liverpool and Manchester Rail Road for the six months ending 30th June, were 34,692*l*. The Directors have ordered a dividend for that period, £4 10s. per share.

Improved Method of Sheathing the Bottoms of Vessels.

To the Editor of the Mechanics' Magazine:

SIR,—Having in a late communication described an apparatus for raising vessels for the purpose of repair, I shall now propose an improved method of sheathing the bottoms of vessels, as follows: Long plates of copper, or other metal, are cut to a breadth and shape nearly corresponding with those of the planks over which the sheathing is to be laid; and these plates are so placed on the planks that the edges of each plate shall lie between the seams of the planks. Each plate is first tacked to the bottom with small tacks or nails, merely sufficient to sustain it, till two or more plates are placed side by side, the edges of each two plates being nearly one fourth of an inch apart; then a flat rod of copper or brass, about five eighths of an inch wide, and one eighth of an inch thick, having counter-sunk screw holes through it at every two or three inches of its length, is placed over the seam formed by the edges of each two plates, and is fastened with wood screws, or nails with heads similar to those of wood screws, that when driven the heads may be even with the surface of the metallic rod. The plates and rods should be as long as the vessel to which they are applied; but when this is not practicable, the ends of each piece must be chamfered so that the end of one piece may extend a little over that of another, without occasioning any projection or unevenness in the surface. The principal object of the improvement is to facilitate the speed of vessels, particularly steamboats. For this purpose, plates of an alloy, composed of tin and lead, equal quantities, are decidedly preferable to those of copper.

I claim as original the method of fastening long plates of sheathing by means of rods, as above described.

R. PORTER.

Billerica, Aug. 12, 1834.

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 487.)

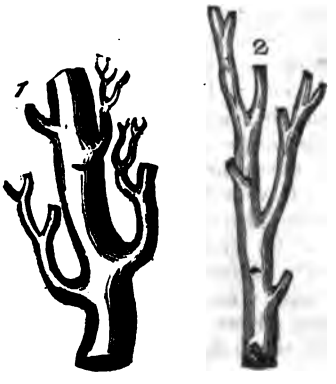
With these facts before us, we turn with interest to what the anatomist too often contemplates with unconcern: we mean the different curves in the branching of the arteries and veins; for by this law of hydraulics the junction of the branches and trunks of the arteries and veins ought to be different, as the one vessel, the artery, carries the blood out from the heart, that is, from trunk to branch; and the other vessel, the vein, carries it in the opposite direction towards the heart, or from branch to trunk.

And, in matter of fact, their branchings are very different, and characteristic of the vessels. We have heard a teacher of anatomy express himself in this manner: "The arteries are active and powerful vessels, which carry the arterial blood out from the heart; and they receive the forcible impetus of the heart. When they are wounded, the man bleeds to death; therefore, nature conveys these vessels into the recesses of the body, taking advantage of every protecting bone—conveying them so that the bones and the muscles protect them. There are no irregularities in their course, and their branches go off at a determined angle, and never irregular; but the veins," he would continue, "are vessels of less importance: they convey the blood back to the heart, with a languid motion, and if they are wounded the blood flows with so diminished a force that you can stop it with the pressure of your finger; accordingly, nature is more negligent of them: they run in all their courses irregularly—some deep, some superficially; and their branches join their trunks with awkward irregular curves and elbows."

This is in good feeling and is in part true; but it contains somewhat of the error which runs through most anatomical discourses, of supposing things are irregular, as if the objects in view were inartificially and imperfectly attained. From inattention to the hydraulic principle, he seems not to have considered that the connection of trunk and branch must vary according to the direction of the stream—that the direction of the branch, which is adapted to lead the stream from the trunk into the branch, must be altered when the design is to convey the fluid from the branch into the trunk.

The reader will now understand, that the branch of the artery (fig. 18, No. 1,) gently diverges from the direction of the stream,

Fig. 18.

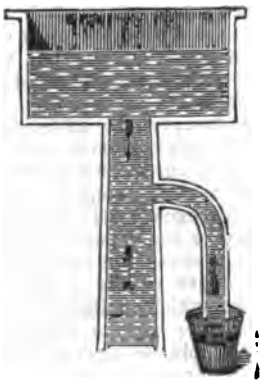


while the branch of the vein, in No. 2, enters abruptly and at right angles. We may illustrate this, by observing, that if we could suppose the vein substituted for the artery, and the artery for the vein—if the vein carried the blood outwards, instead of towards the heart, and the artery conveyed the blood back to the heart,—the blood could not run in the circle; it would be retarded, and congestion would take place, somewhere in its course.

We have seen by the demonstration above, that if the veins of the human body were rigid tubes, and if a hole were made in their sides, air might be drawn in instead of the blood flowing out. This is a matter of vital consequence, for if a very little air be blown into the veins of an animal it dies in an instant, and there is no suffering, nor struggle, nor any stage of transition, so immediately does the stillness of death take possession of every part of the frame.

In conversation with Napoleon's celebrated surgeon, Baron Larrey, on the case of a young man wounded in the neck, he said he had no hesitation in declaring the cause of death to be air drawn in by the veins of the neck, and he quoted instances occurring at the battle of Wagram. These circumstances greatly increase the interest of an experiment made by Dr. Barry, who found that on introducing a tube into the vein of the neck, and placing the other end of the tube in a vessel of water, the water rose during inspiration. The difficulty of explaining this arises from those veins being membraneous tubes, and consequently compressible; but in the act of inspiration, not only are the ribs and breast bone raised, but the muscles of the neck attached to the collar bone rise from the veins of the neck. By this means, instead of suffering the compression of the incumbent parts, the atmospheric pressure is taken off the veins; they are brought to the condition of rigid tubes; and the principles of hydraulics explain the rest. Thus, fig. 19 is a reservoir emptied by a perpendicu-

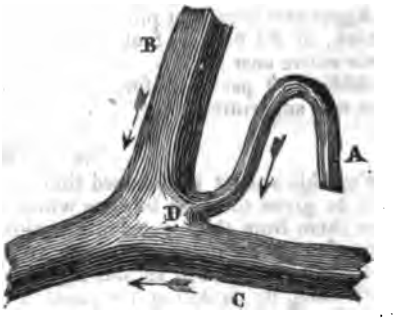
Fig. 19.



lar tube, into which a smaller tube is inserted. The water descending by the larger tube will draw the water up through the lesser tube, so as to empty the glass, in which its lower end is immersed.

We shall here give an example of the manner in which the trunk of the absorbent system joins the venous system, a circumstance which has not escaped the notice of anatomists. The absorbing or lymphatic system consists of a set of vessels different from arteries and veins, which imbibe by a sort of capillary attraction at their extremities, and convey their fluids towards the centre, without any such impulse as the proper blood vessels receive from the heart. The stream in the trunk of this vessel has no force to impel it into the stream of blood in the veins; it enters, therefore, in this manner.

Fig. 20.



A is the trunk of this system, called the thoracic duct; B is the great jugular vein descending from the head; and C, the great vein coming from the arm. These veins join at an angle, and the streams from them, in the direction of the arrows, leave a point between them at D, where there is no pressure. If two tubes enter into a larger tube obliquely, and the water be flowing from the lesser tubes into the greater one, and if a hole be bored at the angle of their union, the water will not escape at that hole. Therefore, the fluid from the thoracic tube A meets with no impediment at the point D; when entered, we have seen, by a former diagram, how the attraction of the more forcible stream will draw the contiguous fluid after it. By this contrivance, if we may use the word, the fluid in the absorbing system finds access to the red blood, and is carried into the heart. We might continue this subject by considering the influence of respiration on the circulation; but we shall pursue the inquiry into the hydraulic principles, as applicable to the circulation, independently of pneumatics.

The law of inertia, which is of easy comprehension as it regards solids, is also applicable to fluids; it is easier to keep a column of water in a pipe in motion than to put it into motion from a state of rest.

In a forcing pump, when after each movement of the piston the columns of water become stationary, power is unnecessarily lost by bringing the column of water, which is in this state of rest, again into motion; but if a second blow of the engine be given to the column of water whilst it is yet moving, it is found to be more easily pressed forward, and no part of the force is lost in urging it from a state of rest into motion. This is evinced in the contrivances of the engineer. He employs two forcing pumps instead of one, and he so applies his lever as to operate alternately on the one and the other; to the end that the water in the pipe may be kept in uninterrupted motion. Let us apply this principle to the circulation of the blood.

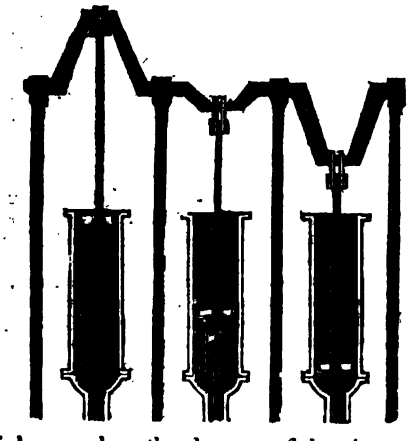
If the heart were the only power forcing on the blood, there would be a cessation of motion after each pulse of the heart, and therefore a great part of its power would be lost. This explains why there is a power in the artery as well as in the heart. The artery being muscular seconds the operations of the heart; its muscularity, and the muscularity of the heart, are powers exercised alternately, and which, acting like the double stroke of the engine, permit no interval to the motion of the column of blood. If the heart had to act upon a column of blood

at rest, not only much of its force would be unnecessarily exhausted, but it would be excited to propel an inert body, and a dangerous shock would arise from the resistance.

If we pursue this subject, and inquire what is essential to such a hydraulic machine as we are contemplating, we shall perceive that the engineer meets with a difficulty in adjusting the powers of his two pumps, and finds an interval, or pause, in the application of their forces.

To obviate this, he makes three cylinders, the pistons of which are moved by a crank,

Fig. 21.

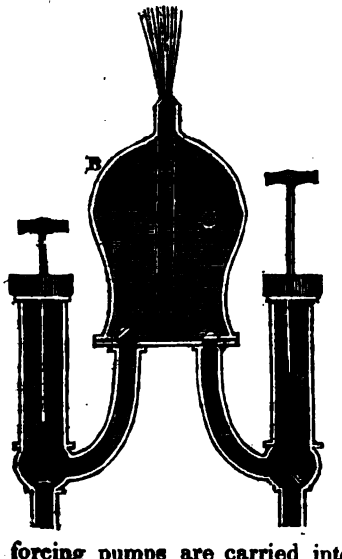


which so orders the descent of the pistons as to fill up this interval, so that one of the pistons shall be always descending; and these pumps propelling the water into a common tube, there is no interval to the motion of the fluid through it.

By this example we are led to look for something corresponding in the machinery of the circulation. We find no third active power, however; yet we find a quality in the blood vessels which answers the purpose much better. But to comprehend this, we must observe that the engineer has a more admirable contrivance than this of a third pump to adjust the action of the other two.

He confines a body of air, which, by its elasticity, performs the office. The pipes

Fig. 22.



of two forcing pumps are carried into the reservoir, B; they convey the water up to C, by which time the air is compressed, and its elasticity thereby increased. That elasticity is exerted without interval, and, acting on the water, C, propels it into the tube, D, uninterruptedly.

Just such an elastic property is possessed by the arteries. The great artery which goes out from the heart, as we have had repeated occasion to observe, makes a sweeping curve; it is capacious, and is the most perfectly elastic of any thing in nature. Here then we have the three powers which the engineer finds necessary to employ. We have the alternate action of the heart and the artery, and we have an elasticity, which, though passive, is essential, both to the uniform flow of the blood, by filling up the interval in the action of the two powers, and to the safety of the engine itself; for without this elasticity, there would be such a jar as must speedily destroy the mechanism.*

There is nothing more admirable than the influence of this elastic power; it is greatest in the coats of the artery near the heart, weaker in the coats of that artery as it recedes from the heart: this very evidently declares its use, but we shall take a more sufficient proof, although an unhappy one.

As life advances, the arterial system loses much of its elasticity, and becomes rigid. This is so common an occurrence that we can no more call it a disease than the stiffened joints of an old man: it is the forerunner or the accompaniment of the decline of life. But this sometimes takes place too early in life, and to an extreme degree; and from its effects we must call it morbid, for it not unfrequently happens that the muscular power of the heart being still entire and vigorous, the arteries can no longer sustain it. They are not now endowed with that power which, yielding to the heart's action, resists, and recoils the more it yields,—which takes off all sudden shock, and which in yielding wastes no power, since on its recoil it gives as much force to the acceleration of the blood as was lost of the heart's action. The artery then, becoming rigid, yields indeed to the heart's impulse, but has no recoil. It is permanently dilated or enlarged. It is now called aneurismal. A stronger impulse from the heart, excited by inordinate action or passion, chips and bursts the now rigid coats of the artery. If the breach be sudden, it is death; if it be gradual, a pouch forms—a true aneurism. And now we have the proof we require: for this bag coming to press upon the solid bones, they are destroyed. That action of the heart which was so lightly and so easily borne whilst the vessels were elastic, now beating upon a solid structure, in a short time destroys it. Thus we are led to a more accurate knowledge of the fine adjustment of the active and resisting properties in the circulating vessels during youth and health, by what takes place on a very slight derangement of those powers.

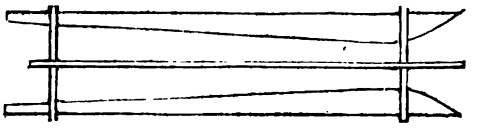
* But does the blood flow uniformly? Not precisely so in the arteries, since the stroke of the heart is more powerful, or rather more concentrated, than that of the arteries. During the contraction of the ventricle of the heart, the artery is dilated, but it is never emptied; and the flow of the blood forwards in the course of the circulation is not for an instant interrupted.

REMEDY FOR DRY ROT.—The London Literary Gazette, of June 14, contains a sketch of a lecture upon Dry Rot, delivered by Mr. Faraday at the Royal Institution, from which we learn that a complete remedy has been discovered by a Mr. Kyan, who submitted his proposition to the Lords of the Admiralty, who have caused it to be proved and have advised him to take out a patent for it. The process is as follows: The timber is immersed in a solution of the corrosive sublimate, which is pumped into a tank, in which the timber is held down by a transverse beam, so as to prevent its floating, and after submersion for a week the operation is completed.

It has already been adopted with the timber used in the National Gallery, the new works at the British Museum, the warehouses of the East India Company, by various churches and other public buildings; and many engineers connected with the Liverpool, Manchester, Stanhope, Tyne, and Wear railways, are using timber thus prepared, in lieu of stone sleepers. It is also extensively introduced in the ship yards of England, and many gentlemen have adopted it in their domestic architecture.—[Nat. Gaz.]

Twin-Passage Boat for Canals. [From the London Mechanics' Magazine.]

SIR,—It occurred to me when I was writing the concluding paragraph of my last letter to you, that twin passage-boats having the form shown in the annexed sketch, (which



is a top view,) would send no waves towards the banks, and might be used to advantage on canals that had no stone facing along the sides. The two outside surfaces of the boats are straight and parallel in the direction of their length, but may be curved like any other boat, from the top edge downwards, and the two interior sides must have the gig-shape as nearly as possible. The two cross-pieces connect the boats, and the tow-line is fixed to the part running up the centre. Any wave that is formed between the boats will settle at the stern, and act in the same way as the wave in the case of the Paisley canal passage-boats; and the parallel outside surfaces of the boats can raise no wave. I made a model five feet long, with the other dimensions in proportion, to try its effect, and when it was drawn through the water at the best velocity, the water all around was *perfectly* smooth, although there was a large wave formed between the boats. The wave commenced a little behind the bow, and it was level with the surface of the canal before it reached the stern; if the curved sides of the boats had been out, this wave would have been driven to the banks of the canal.

As twin boats are not likely to upset, they may be built very narrow, and not take up much room in the breadth of the canal, if their draft of water is increased. Part o the deck that holds the boats together, may be formed into seats, and all the passengers may sit with their feet down into the boats, and their faces towards the banks of the canal. The centre part of the deck may be used for walking upon, as the passengers, when standing on it, will be high enough to see over the awnings that cover the cabins. At places where the deck, for the sake of binding the boats more firmly together, must stretch from outside to outside, doors may be left from the deck to the cabins. As no waves *leave* a boat of this sort, it certainly must take less power to work it, on which account I think the principle may be applied to little sailing craft, such as pleasure boats. The waves that are formed by

the *paddle* of a twin steamboat might be got quit of by forming the stern properly. In my model, the outsides were plain and parallel in the up and down, as well as in the length direction. I am, sir, yours truly,

JAMES WHITELAW

Glasgow, April 18, 1834.

RAILROAD TRAVELLING IN ENGLAND.—"Although the whole passage between Liverpool and Manchester is a series of enchantments, surpassing any in the *Arabian Nights*, because they are realities, not fictions, yet there are certain epochs in the transit which are peculiarly exciting. These are the startings, the ascents, the decents, the tunnels, the Chat Mose, the meetings. At the instant of starting, or rather before, the automaton belches forth an explosion of steam, and seems, for a second or twe, quiescent. But quickly the explosions are reiterated, with shorter and shorter intervals, till they become too rapid to be counted, though still distinct. These belchings or explosions more nearly resemble the pantings of a lion or tiger, than any sound that has ever vibrated on my ear. During the ascent they became slower and slower, till the automaton actually labors like an animal out of breath, from the tremendous efforts to gain the highest points of elevation. The progression is proportionate; and before the said point is gained, the train is not moving faster than a horse can pace. With the slow motion of the mighty and animated machine, and the breathing becomes more laborious, the growl more distinct, till, at length, the animal appears exhausted, and groans like the tiger when nearly overpowered in combat by the buffalo.

"The moment that the height is reached and the descent commences, the pantings rapidly increase; the engine, with its train, starts off with augmenting velocity; and in a few seconds it is flying down the declivity like lightning, and with a uniform growl or roar, like a continuous discharge of distant artillery. At this period, the whole train is going at the rate of thirty five or forty miles en hour! I was on the outside, and in front of the first carriage, just over the engine. The scene was magnificent, I had almost said terrific. Although it was a dead calm, the wind appeared to be blowing a hurricane, such was the velocity with which we darted through the air. Yet all was steady; and there was something in the precision of the machinery that inspired a degree of confidence over fear—of safety over danger. A man may travel from the Pole to the Equator, from the Straits of Mallacca to the Isthmus of Darien, and he will see nothing so astonishing as this. The pangs of Etna and Vesuvius excite feelings of horror as well as of terror; the convulsion of the elements during a thunder storm carries with it nothing but pride, much less of pleasure, to counteract the awe inspired by the fearful workings of perturbed nature; but the scene which is here presented, and which I cannot adequately describe, engenders a proud consciousness of superiority in human ingenuity, more intense and convincing than any effort or product of the poet, the painter, the philosopher, or the divine. The projections or transits of the train through the tunnels or arches, are very electrifying. The deafening peal of thunder, the sudden immersion in gloom, and the clash of reverberated sounds in confined space, combine to produce a momentary shudder or idea of destruction—a thrill of annihilation, which is instantly dispelled on emerging into the cheerful light.

"The meetings or crossings of the steam trains flying in opposite directions are scarcely less agitating to the nerves, than their transits through the tunnels. The velocity of their course, the propinquity or apparent identity of the iron orbits along which these meteors move, call forth the involuntary but fearful thought of a possible collision, with all its horrible consequences. The period of suspense, however, though exquisitely painful, is but momentary; and in a few seconds the object of terror is far out of sight behind.

"Nor is the rapid passage across the Chat Moss unworthy of notice. The ingenuity with which two narrow rods of iron are made to bear whole trains of wagons, laden with many hundred tons of commerce, and bounding across a wide, semi-fluid morass, previously impassable by man or beast, is beyond all praise, and deserving of eternal record. Only conceive a slender bridge of two minute iron rails, several miles in length, level as Waterloo, elastic as whalebone, yet firm as adamant! Along this splendid triumph of human genius—this veritable *via triumphalis*—the train of carriages bounds with the velocity of the stricken deer; the vibrations of the resilient moss causing the ponderous engine and its enormous suite to glide along the surface of an extensive quagmire as safely as a practised skater skims the icy mirror of a frozen lake.

"The first class or train is the most fashionable, but the second and third are the most amusing. I travelled one day from Liverpool to Manchester in the lumber train. Many of the carriages were occupied by the swinish multitude, and others by a multitude of swine. These last were 'neat as imported' from the Emerald Isle, and therefore were naturally vociferous, if not eloquent. It was evident that the other passengers would have been considerably annoyed by the orators of this last group, had there not been stationed in each carriage an officer somewhat analogous to the Usher of the Black Rod, but whose designation on the railroad I found to be 'Comptroller of the Gammon.' No sooner did one of the long-faced gentleman raise his note too high, or wag his jaw too long, than the 'Comptroller of the Gammon' gave him a whack over the snout with the but-end of his shillelagh; a snubber which never failed to stop his oratory for the remainder of the journey."

[*From the Glasgow Courier*]

STEAM CARRIAGES ON PUBLIC ROADS.—Since our last notice, these vehicles have continued to perform their trips, with increasing success, between Glasgow and Paisley. Although the roads still remain in a much worse condition than is usual at this season of the year, and, although the broken stones laid on them by the Trustees had done considerable damage to the machines, these obstacles have been entirely overcome, and the carriages are daily crowded with passengers. As an indication of the perfect confidence placed in the vehicles, we may observe that several parties of ladies and gentlemen have made excursions to Paisley, and returned with them as a pleasure trip. The following is the running of morning trips on the six last days, the time being reckened between Tradeston, Glasgow, and the Tontine, Paisley:—Thursday, 17th July, ten o'clock coach to Paisley, 40 minutes; Friday, 18th July, 44 minutes; Saturday, 19th July, 35 minutes; Monday, 21st July, 50 minutes; Tuesday, 22d July, 50 minutes; Wednesday, 23d July, 35 minutes. We have only further to remark, that the carriage which left Glasgow yesterday, at 12 o'clock, did the distance, from the Half-way house to Paisley, fully 3 1 2 miles, in ten minutes, being at the rate of upwards of 21 miles an hour! And that, on the two last trips on Saturday, the anxiety to get places was so great, that the carriage to Paisley took out 28 passengers, and returned with 39!

WM. COBBETT.—At the suggestion of a correspondent, we copy from the *Encyclopædia Americana*, a biographical notice of this individual.

COBBETT, William, a notorious political writer in England and America, was born in 1766, in the county of Surry, England, the son of a farmer, from whom he received the rudiments of his education—reading, writing and arithmetic. In 1783, he left the plough for London, where he became "an understrapping quill-driver," as he calls himself, to an attorney in Gray's Inn. This employment not suiting his restless disposition, he enlisted as a common soldier in 1784, and remained in England a year, spending his leisure hours in reading and study, particularly in the study of grammar. He wrote out the whole of Lowth's grammar two or three times, got it by heart, and repeated it every morning and evening. He then sailed to join his regiment in America, and remained there, in Nova Scotia and New Brunswi k, till 1791, when the regiment was relieved and sent home.—Serjeant-major Cobbett here left the service, and terminated his military career. In 1792, he first came to the United States, after a short visit to France.—He began his career in Philadelphia, as a writer of political pamphlets, under the well known name of *Peter Porcupine;* soon after engaged in the business of a bookseller in that city, and publishnd, at the same time, a daily newspaper, called the *Porcupine*. The French interest, which then prevailed in the United States, he opposed with great violence, mingling the coarsest personal abuse with the severest political invective. Having been convicted for a libel on Doctor Rush, and condemned in $5000 damages, he left the country, and returned to England in 1800. Here he published the Works of Peter Porcupine, containing a faithful Pictures of the United States, &c. (London, 1801, 12 vols, 8vo.), consisting of selections from the *Porcupine*, with remarks illustrating them, and of his other personal and political writings, previously published in America.—This work was *dedicated* "to a declared enemy of republicans and *levellers*." In it Doctor Priestley (*Observations of Priestley's Emigration*), Doctor Rush (in the *Rush-Light*), Doctor Franklin, &c., were unsparingly abused. He soon after established the Weekly Political Register (commenced in 1802), which has been conducted with considerable talent, but great bitterness. In 1810, he was convicted of a libel with intention to excite a mutiny, and condemned to confinement in Newgate, and to pay a fine of £1000. Although the fine was paid by subscription among his friends, he addressed a letter to the king in 1828, praying his majesty to restore him the sum. In 1815, he became the champion of Napoleon, whom he had assailed with the utmost vehemence. In 1817, he again visited America; but we soon after find him in England, where, in 1819, he published his Year's residence in America. He was never naturalized in the United States, objecting to the oath required, abjuring all allegiance to any other power. He now connected himself with the party called *radicals;* and we often find him haranguing at public meetings with great success; but, a convicted libeller on both sides of the Atlantic, twice cast out by his own country, and as often rejected by America, alternately praising, abusing, calumniating and panegyrizing the same party, his inconsistency and self-contradictions have much diminished his influence, notwithstanding his great address and his popular eloquence. Besides his works already mentioned, the principal are Parliamentary Debates, from 1803—10—11, 20 vols. 8vo.; *Maitre Anglais*, or English Grammar for the Use of Frenchmen, which has obtained great reputation in France, where it has passed through many editions (the examples, illustrating the rules, are severe attacks on royalty); his Life, written by himself (1816); Treatise on Cobbett's Corn* (1828); (the title-page of this work is printed on paper made of the husks of Indian corn). In the latter part of 1829, he was engaged in delivering lectures on the causes of the existing distress in England, and the best means of relieving it.

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* By this term this modest gentleman designates Indian corn or maize, the cultivation of which he has been endeavoring to introduce among his countrymen.

[*From Crawford's Mission to Ava.*]

"The circumstances which attended our introduction to his Majesty, appeared to call for a distinct remonstrance; and in conformity with what I had intimated to the Burmese chiefs at the opening of the conference, I addressed them in the following terms, through Mr. Judson. My notes were prepared during the intervals of the conference, and handed over to the interpreter, who had time to translate and consider them before he spoke. The language, as it now stands, is nearly a literal translation of what he delivered in Burman.

E. "The principal business of this day's conference being over, I take this opportunity of addressing you respecting some circumstances of an unpleasant nature which occurred yesterday. This embassy, you are aware, came to the Burman Court from a great government exercising sovereign authority.—The presents which we brought were offered as marks of friendship only. When you recollect the issue of the late war, was it not generous on the part of the Governor-General to send an embassy and presents in this way? Was it not conferring a favor? (Here the junior Atwen-wun very readily replied, 'Yes, yes.) The mission was conveyed to the Palace on elephants miserably equipped, compared to those on which your own officers of all ranks rode. We were made to dismount at the corner of the palisade of the Palace. Your own officers rode in their litters to the very gate. Your officers of every rank made use of their umbrellas to the very gate of the Palace. We were rudely requested to take ours down, long even before reaching the Rung-d'hau. A Sare-d'haugyi wanted us to make an obeisance to the Palace when we were not near it, although I had repeatedly caused it to be signified that we should make no obeisance except to the King in person, and your officers had acquiesced in this arrangement: this was an act of gratuitous rudeness. I beg that the Saré-d'haugyi may be reprimanded. The list of the Governor-General's presents was read along with the list of presents from Saubwas and others. There was great impropriety in this, which cannot escape yourselves. I mention all these matters, that they may never happen again. I am convinced they were unknown to his Majesty, or they would not have occurred now."

B. "It is the uniform custom of the country, in the case of embassies from China, Cochin-China, and Siam, that the ambassador dismount at the corner of the palisade. All these points of etiquette are settled by the King's order. There was no intentional disrespect in the present case. All the Government officers desired to treat the Ambassadors handsomely. So far as the Saré-d'haugyi has behaved improperly and disrespectfully, it is his own affair, and we will take measures for seeing him punished."

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"Many questions were put to us respecting our reception at the Court, and the things we had seen. They knew that I had visited the Court of Siam, and a great object with them was to obtain a favorable answer to the comparison which I should draw between that and the Burman Court. No essential point connected with the wealth or strength of the two nations was at all touched upon. The principal topics were the comparative splendor of the two palaces, of the court, of the courtiers, and of the King. They were especially desirous to know, whether the King of Siam had or had not a white elephant. On the first-mentioned topics they received such replies as gratified them; but on the important subject of the white elephant, it seemed, under all circumstances, not necessary to withhold the truth from them. They were sensibly mortified when I informed them, that the King of Siam had six white elephants instead of one, and that I had actually seen four of them. They asked, whether the Siamese elephants were equally white with that which I had seen yesterday. I replied that the Siamese elephants were all whiter. They seemed to doubt the accuracy of my information, and began a sort of cross-questioning. They begged to know when I had visited Siam; who was King at the time; his age; his successor, &c. &c. I satisfied them with precise dates and circumstances. They dropped the subject, and their silence evidently implied that they were chagrined that every circumstance of the parallel drawn between themselves and the Siamese should not have received a flattering answer."

It has been already intimated that the Burmese nobles were rather intent upon trifles; but, with the weakness, they had the penetration of children. Of this, the basis on which the parties were to treat, or the duties of an Ambassador, may afford a specimen:

"The Envoy Crawford is a distinguished, wise, and prudent man, selected by the English ruler. He has come to the royal country in the capacity of Ambassador. We also are persons trusted and favored by the Rising Sun Monarch; and we are selected and appointed by his Majesty to discuss whatever is to be discussed. The discussions relate not to the personal affairs of the Envoy Crawford, the affairs of his children, or of his wife. We also speak not of our personal affairs, the affairs of our children, or of our wives. It is *our* business to please the golden heart of the Rising Sun Monarch, and *his* to please the heart of the English ruler; and thus we are to have regard to the good of both parties. It is proper to bear in mind, that the way to preserve peace between the two great countries, is to keep in view the welfare of both countries and sovereigns, and so to manage the discussion, that there may be no excess, but straightness and right."

The childishness is not confined to the Ministers. An "exalted personage" is represented as far from being one whom "passion cannot shake," the effects are shown in no very dignified manner.

"On the 10th instant, a circumstance took place, which in almost any other country would have been very immaterial, but which was here attended with unpleasant consequences to the mission. His majesty, contrary to the custom of his predecessors, is frequently in the habit of going abroad with little pomp or ceremony. On the occasion now alluded to, he was amusing himself on the river side with an elephant fight. Four or five soldiers of the European escort happened about this time to cross the river, and passed by without noticing the King, or indeed being aware that he was present. This gave high offence. According to the Burmans, the soldiers ought to have squatted down, thrown off their shoes, and held up their hands in an attitude of supplication. I was immediately waited upon by the chiefs to remonstrate upon the conduct of the soldiers, which was represented by them to be such as would cost a Burman his head! I had the satisfaction to find, on inquiry, that the soldiers were not in the least to blame; and assured the chiefs, that had they been aware of his Majesty's presence, they would have conducted themselves with every possible respect towards him, and rendered him the same compliment as to their own sovereign. This assurance, however, fell far short of their expectations. I informed them, therefore, that the soldiers should not again be allowed to enter the town, to prevent the possibility of all misunderstanding on the subject. Independent of my assurance, however, they took effectual steps to prevent their doing so, by ordering the gates of the town to be closed whenever persons belonging to the Mission presented themselves. As an apology for this ungracious proceeding, the example of the Chinese Embassy was quoted; no individual belonging to which, it was stated, and I believe correctly, was ever allowed to enter the walls of Ava. The King was described to us as being in a high state of irritation—going about with a spear in his hand, as his custom on such occasions, and vowing destruction to his recreant Ministers, whom he charged with all kinds of offences. If I am rightly informed, his irritation arose from a different cause. Upon our first arrival, his Ministers appear to have deceived him with false hopes and expectations, by representing 'that the British Mission was sent by the Governor General to make submissions, and to atone for what had passed, by entering into arrangements for the restoration of the ceded provinces, and the remission of the debt due.' There was a necessity for undeceiving his Majesty at last; and his coming to a knowledge of the real facts was, in all probability, the true cause of the displeasure which his Ministers feigned to attribute to the pretended disrespect of the European soldiers. I should have mentioned also, that offence was taken at the conduct of some of our native followers, and especially of the Lascars, or native seamen of the steam-vessel. The charge against them also was want of due respect when the King presented himself. It was stated that they did not throw themselves, as they should have done, into a crouching attitude; but stood on tiptoe, and stared—far too curiously."

"The Ministers last night reported to the King the progress of the negotiation. His Majesty was highly indignant; said his confidence had been abused, and that now, for the first time, he was made acquainted with the real state of affairs. He accused the Ministers of falsehoods, malversations, and all kinds of offences. His displeasure did not end in mere words; he drew his dá, or sword, and sallied forth in pursuit of the offending courtiers. These took to immediate flight—some leaping over the balustrades which rail in the front of the Hall of Audience but the greater number escaping by the stair which leads to it; and in the confusion which attended their endeavors, tumbling head over heels, one on top of another. Such royal paroxysms are pretty frequent; and although attended with considerable sacrifices of the kingly dignity, are always bloodless. The late king was less subject to these fits of anger than his present majesty, but he also occasionally forgot himself. Towards the close of his reign, and when on a pilgrimage to the great temple of Mengwan, a circumstance of this description took place, which was described to me by an European gentleman, himself present, and one of the courtiers. The King had detected something flagitious, which would not have been very difficult. His anger rose; he seized his spear, and attacked the false Ministers.—These, with the exception of the European, who was not a party to the offence, fled tumultuously.—One hapless courtier had his heels tripped up in his flight; the King overtook him, and wounded him slightly in the calf of the leg with his spear, but took no further vengeance.

Simeon South's Letters to his Kinsfolk.—The most entertaining chapters in the book, are those which show up the folly and stupidity of English visiters on the Continent, and the successful endeavors of the *chevaliers d'industrie* to cheat them of their money and daughters. The following extract contains nothing new, but describes the process just mentioned with spirit and truth. It can hardly be deemed an exaggerated picture of the extreme gullibility of our countrymen abroad; though it should be added that such occurrences are now more rare than formerly.—[London Spectator.]

John Bull is nowhere more foolish, more ridiculous, than when he is abroad. He and Mrs. Bull and their daughter Polly look up with so much adoration to, are so proud to be acquainted with, titled personages, and so vain of exhibiting the cards of Madame la Duchesse, M. le Marquis, &c. &c., that they are equally assiduous to form the acquaintance so eagerly wished for, but with more polished though more crooked address managed, by the intriganies and the chevaliers. Mrs. Bull is enraptured with the condescensions of the former. Polly waltzes, and is in love with the latter. John does not like his daughter marrying a Frenchman; but Mamma would be so delighted to see Polly a duchess; and besides, Monsieur Count Shaddo is so handsome, and even so condescending as to eat his dinner at first once, and now seven times-a week with the Bull family, that John, to be let alone, is at last obliged to yield to his wife's teazing and to Polly's sighs. He agrees to give the lovers a respectable sum on the wedding-day, as M. le Comte's father will give him nothing down; although the former is to inherit the estate and chateau in the South of France. The estate and the Count's father are always at a great distance from Paris. That both exist, all the intriguantes will swear. John is bamboozled; his wife is in ecstasies with the idea of her family being so soon allied to nobility, and the anticipated precedence and consequences she will have attained at the country balls. Polly, pretty Polly, is desperately, irrevocably gone in love! She is so happy; the Count says such delicious things to her; tells her she is an angel; sings divinely; plays on the piano with such admirable taste and execution; and Polly Bull promenades with dignity and ease; quadailles with such admirable elegance, such natural grace; waltzes like a sylph; gallopades so *elasticly;* dresses so fashionably, yet so modestly; speaks French so purely,—so well that, but for her beauty, charms, and accomplishments, she might be taken for a Parisian. They marry; John comes down handsomely with drafts on his banker. He too is now delighted. His daughter has her cards printed "Madame la Comtesse Shaddo de Montpellier." Mrs. Bull is in raptures. John must be more generous—a few hundreds more. What a hard-hearted old skin-flint the Count's farther is; but what can be expected from a Carlist, whose son is a Liberal?—John Bull, too, is a Liberal; and must be delighted that his son-in-law is so; and more, Count Shaddo is a contributor to the *Journal des Debats*, the oracle of the Doctrinaires. Count Shaddo has exigencies: he whispers infusions to Polly, Poll hints the matter to her mother. Mrs. Bull to John: John begins to feel qualms of prudence, having already signed drafts to the amount of rather more than any previous year's expenditure. When John reflects, he becomes a rational animal,—discreet too. He says, "I must first talk over the matter with the Count:" he must have a *fair* statement of his affairs, dates, items, names, and totals. John now viewed the matter as he would his debtor at a meeting of creditors. Count Shoddo bows himself with the utmost *sang froid* into John's presence, commences with a flood of compliments, and politics. John stops him short by saying, "Count when I transact business, I come at once to the point. Mrs. Bull tells me, that Poll tells her that you want an advance—a credit. Now to the point: let me have a full and true statement of all your affairs, private and public, with vouchers for each item, and I will advance what appears reasonable and prudent. Until then, not one farthing shall I give; my mind is made up." John sat back in his chair: the Count began to compliment him. "I am very well, Count," said John, "I want only a satisfactory schedule of your affairs, with the vouchers: mind, that I never will admit an item, in matters of business, without *bonâ fide* vouchers. No compliments, Count, until you bring the schedule. No, no, no, I am John Bull, dowaright and upright, all the world over!" The Count bowed out of the salon. An acquaintance of three weeks with the Bull family supplied him with 66,000 francs, and with Polly—no bad game. But as John must be satisfied with more substantial matter than the cobwebbery of a chevalier d'industrie's politesse, Shaddo neglects Polly; she is miserable, and Ma intreats Pa to give the Count more money. "No, says John, "I never will give Poll's husband a premium to live with her. She took him for better and for worse; and I have just learned from my banker, in Rue Lafitte—whom, if I were not a calf, instead of what I ought to be, a Bull, I should have consulted before I consented to Poll's marriage—that her ignoble husband (Poll screeches) is not Count Shaddo, the son of the Marquis de Shaddo de Montpelier, but plain Mr. Shadow, chevalier d'industrie, and the bastard son of a grocer in Rue Saint-Martin; that he keeps a pretty young mistress; and that an old, rich, voluptious dowager keeps him. So much for the Bull family's visit to Paris.

Intercourse with the World.—Increasing our connections with mankind is like an extended line of an army, vulnerable at many points, and liable to be broken and discomfited. If we concentrate and incastellate our forces, we may, indeed, remain undisturbed, and we may also lose all in a coup-de-main. Alas! how dark is the ken of human foresight.

NEW-YORK AMERICAN.

SEPTEMBER 6—12, 1834.

LITERARY NOTICES.

PRACTICAL PERSPECTIVE for the Use of Students; translated from the French of *T. P. Thénot*, by one of his Pupils. New York: Bliss, Wadsworth & Co.—The aim of this treatise is to enable those who have not acquired the mathematical principles upon which the art of perspective is founded, still to comprehend and observe its rules.

The translation here offered has the sanction of the professors of the art, and its lessons are enforced by good engravings.

FRANCIS BERRIAN, or the Mexican Patriot: by TIMOTHY FLINT, 2 vols. Philad.—KEY & BIDDLE.

This is a second edition of a work heretofore noticed in these columns, as developing, amid many improbabilities, scenes of great interest. The writer—as our readers from the frequent extracts we have made from his various publications know—possesses in no ordinary degree the power of moving the passions; and there are occasions in these volumes when this power is abundantly exercised.

THE KNICKERBOCKER for September. N. Y.—J. Disturnell.

THE NEW-ENGLAND MAGAZINE for September.—Boston—J. T. Buckingham.

The first paper in this number of the Knickerbocker, is from the same pen as *Francis Berrian*, and presents the substance of an elaborate lecture delivered by the writer before the Cincinnati Lyceum on "The Past—the Present—the Future."

This is a mighty subject. In the present instance, however, it is treated cursorily but cleverly. Of the Past, the lecturer thus speaks:

The most important intellectual era which our world has seen, was the period of the invention of printing. Well might the retainers of the hierarchy of the day give out, that the inventor borrowed it of Satan; for it rung the eternal knell to bulls and anathemas, and all the terrible influence which the priesthood possessed over hood-winked ignorance and blind submission. The press lifted its mighty banner, labelled from the beginning, "*No aristocracy of science—no influence but persuasion.*" Truth heard in her dungeon, felt that her time was come, burst her chains, threw open her prison doors, and with persuasion in one hand and reason in the other, commenced her unwearied and unabating progress. The reformed nations took up the Bible, and insisted that God had given them the inalienable right of interpreting it for themselves. The polarity of the needle, and, as a consequence, America was discovered, and a new and irrepressible impulse was given to the human mind.

True, there was a strong revulsion. The Inquisition kindled its fires. Gallileo had published that the earth moved round the sun, instead of the sun round the earth, as was the orthodox doctrine of astronomy. The priests, on the contrary, willed the sun to move and the earth to stand still; and they had power to compel Gallileo to burn his books, and abjure his doctrine, But the stubborn order of the universe continued to chime the eternal music of the spheres in its own way, bulls and anathemas to the contrary notwithstanding. Persecution was as powerless to shake the invincible purpose of the free spirit, as to reverse the movements of the heavenly bodies. As one martyr to the truth fell one after another, ten aspirants arose to replace the victim, and to thunder in the ears of tyranny, that neither fear, fire nor death can awe the free mind, or change its convictions. Every year brought accessions to the mass of knowledge, and vigor and fearlessness to the spirit of inquiry. Truth became eagle-eyed, and capable of contemplating the sun with undazzled vision.

The early magistracy and priests of our country had learned in a school—for, in fact, the age knew no other school—that fines may convince, that imprisonment is an admirable framer of syllogisms, that the fear of death can alter a man's convictions in a moment, and that the argument of perdition is perfectly irresistible, unless the mind were given over to judicial blindness. They had seen the Catholics of the old world ply the Lutherans with these most persuasive reasonings. They had observed that the Lutherans, as soon as they had ability, charitably propounded them to the Calvinists. The Calvinists, having felt their efficacy, in their own case, made a gracious tender of them to Servetus and his followers.

Intrepid for indurance as they were, our puritan fathers relished not this vehement ratiocination; and as they came over the seas, they talked earnestly about freedom of conscience and opinion; meaning, as it afterward appeared, that they understood all to be free who were of their opinion, and none else. But though the avowed object of their coming to America, was, that they might make sermons of such length and opinions as pleased them, they early began to bethink them of the easy and approved modes of conversion in the father land. The Quakers were among the first to experience the benefit of these remembrances. Scarcely had their own singed hair ceased to smell of the fires of persecution, from which themselves had escaped, before they began to persecute in their turn. History and song have lauded our forefathers; and of right, for they were great and good, notwithstanding this inherent infirmity of the age and the human mind; but for this we praise them not.

To the eternal honor of our country, its genius from the beginning has been hostile to cruelty; and the argument by fire has never been allowed. It soon also renounced that by fines, imprisonment, and banishment. Our first act, after becoming a nation, was to forget the whole doctrine of persecution, to restrict the priesthood to spiritual functions, to lay a final interdict upon the bans between church and state, and to engraft perfect freedom of opinion, as the master principle, into the body and spirit of our constitution.

Here then we can proudly point to one country, where all opinions are equal in the eye of the law.

Passing on to "the Present," and rapidly indicating some of its peculiarities, this summary evidence of improvement is presented:

As an evidence that the condition of humanity is improving, in consequence of the progress of the age, we select the fact that it has been demonstrated, by comparison of the bills of mortality of most civilized countries, that the annual number of deaths has diminished in the ratio of from three to six per cent., and that in the same countries the length of human life has been extended nearly in the same proportion. As one of the chief elements of this result, we may count the benevelent, and we might add, sublime efforts, that have been made for the suppression of intemperance. An equally palpable one is the discovery of vaccination. What spectacles of horror and mortality would not American cities hnve exhibited, but for this discovery! In demonstration of the ignorance, prejudice and error, that are yet to be vanquished, we produce the fact, that our bills of mortality present no inconsiderable number of deaths of victims either to ignorance or disbelief, or reckless neglect of the vaccine disease, as a preservative against small pox. Are proofs required of improved comfort? We select the improved facilities of rapid, cheap, and comfortable travelling; for we hold, that of all our physical enjoyments, that of cheap and pleasant travelling is the highest and most beneficial. Let us take the Great West for exemple. A family can now travel a thousand miles in many directions, cheaper and more comfortably than they could an hundred, when we first decended the Ohio. Contemplate the pleasure of meeting the intelligent, distinguished, and beautiful,—statesmen and scholars—from every nook of our vast country, courting the cool breezes of the sea, or quaffing medicinal waters at the points of fashionable resort. Not only the most rational pleasure, but enlarged liberality, the breaking down of sectional feeeling, and improved ideas in every respect, cannot but result from those annual summer excursions. The beautiful bay of N. York is wedded by a chain of the most commodious water communications, embracing all the vast fresh water seas of the north, with the Miss esippi and the Gulf of Mexico. Add to this view the great railroad to the Ohio, and the rail-car hoisting its flag to the breeze, and floating from the queen city of the Chesapeake towards the beautiful valley of the Ohio, at the rate of fourteen miles an hour.—Need we ask, what would have been the aspect of Cincinnati at the present day, but for the invention of steamboats? Need we contrast the farmer's team, starting in the month of March through the bottomless mortar beds from Dayton to this flourishing and beautiful city, with the canal boat bringing down its thirty tons of freight, its pleasure party, and its band of music at the same trip? In a word, the whole relative order of things in the West, compared with its *condition* when we first saw it, is the contrast of the immense steamboat proudly sweeping past Cincinnati with its gay town of six hundred inhabitants, and its burthen of five hundred tons, and rounding to the levee at New Orleans in eight days, with the flat boat, moving with the current, starting with the first verdure of spring, to encounter the toil, insalubrity, current, storms, sand-bars, snags, and nameless dangers, with its unwieldly motion, and making a fortunate voyage, if its owner returns safe to his family, to find his harvest ripe for the sickle.

"The Future" is thus sketched out in part:

Let us imagine some features of the anniversary address of him who shall have the honor to lecture to this Lyceum fifty years to come.

"Permit me," he will say, "to take a retrospect of things as they existed fifty years ago. Let me begin with religion. There were then in the land nearly three hundred Christian sects, with the most unpronounceable names in the language. They all proclaimed that God was love, and the Saviour the Prince of Peace; and that, to be his disciple, was to go about doing good. I venerate the gospel, and I dare not go into the Christian practice in those times. If all these sects had had thunder at command, how often it would have thundered! They wrote books against each other, and tracts, and pamphlets, and reviews, and sermons, and journal paragraphs; and there was pope and anti-pope, and presbyter and anti-presbyter, and high church and low church and no church, and radicals and ranters —*ad infinitum*; and the world was stunned with the fierceness of their pureile disputes. In fact, literature was obliged to adopt a term for the spirit of religious disputation. It was named *Odium Theologicum*, or as they translated it in those times, a *righteous hatred*. It is said that all the sects were never known to agree but in one thing, and that was, to allow the current value to the circulating medium of the country. But we are removed fifty years from those gloomy times; and now the greater portion of mankind are Christians on the ground of investigation and conviction; and those who are still so unhappy as not to be so, are obliged, by reverence for the truth, to say of all the sects, 'See how these Christians love one another!' The Christian of every sect takes his brother of every other by the hand. A minister of the gospel is no longer known by the name of his denomination, or by his garb or cloth, but by his mental enlargement, his broad and philosophic views of Christianity, the sanctity of his life, and his more active zeal to do good. Not a book of controversial divinity has been written for the last ten years. The *motto* of every church, the distinctive badge of every denomination, is, 'Glory to God in the highest, on earth peace and good will to men!' They had hackneyed the term *education*, even fifty years ago, in all the changes of dull common-place. But the elements of that sublime science had scarcely been separated from their chaos. Think of their devoting seven years, the morning and the prime of life, to Latin and Greek, particles and prosody included! The Hamiltonian and Belmarian systems of teaching languages were scouted from learned halls, as too vulgarly efficient and rapid in teaching. The venerable fathers had entered the interior of the temple of science through the discipline of birch and tears, and for the credit of the fane, they would not permit a cheaper admission for their sons than themselves. The pupil was taught from the catechism, the pulpit, and the Sunday school, that all good children were so humble as to *esteem others in honor better than themselves*. As they went forth to the secular instruction, the same children were bidden to reach the head of the class, or expect no favor from their parents. On one day in the week they heard that the highest virtue is benevolence, and the best union of character the properties of the serpent mixed with those of the dove. For the other six days, the serpent was the chief inculcation by way of precept and example.—The priest, the instructer, the *litterateur*, the politician, the dancing-master, the world, and the ladies, all communicated distinct and the most opposite impulses; so that nothing could be a more perfect motley of rules of life than the instructions fixed in the memory of the pupil. Is it strange, under such circumstances, when cast into the whirlpool of the world's seductions, that the subject was carried down with the current, and listened finally to his dissipated companion, who assured him that every thing was a lie and a cheat but pleasure, and power, and money? All are aware that we have long since consigned Jupiter and Juno, Mars and Venus, Apollo and Minerva, with the famous Nine inclusive, to the *moles and bats*, to moulder with the things that were.—

We now learn ancient languages for the power which translation gives us over words, and for the spirit of the classics and the philosophy of language. But we acquire modern languages, especially French, German, and Spanish, to perfection, for very different purposes. We study profoundly the natural and exact sciences; and we surround the minds of pupils with such a series of influences, as that one never counteracts the other. Every thing concurs to imbue the young mind with Christian principle and feeling; that is to say, with the most perfect philosophy of morality; and the whole impulse of education is to form a firm, balanced, and consistent character.

Passing over the other articles in prose and poetry, we make room for the following very honorable and characteristic letter from Gen. Washington:

Extract of a letter to the Editor of the 'American Museum.'

MOUNT VERNON, JULY 21, 1788.

SIR:—If I had more leisure, I should most willingly give you any such communications (that might be within my reach) as would serve to keep up the reputation of your Museum. At present, occupied as I am with my agriculture and correspondences, I can promise little. Perhaps some gentleman connected with me may make some selections from my repositories: and I beg you will be persuaded, that I can have no reluctance to permit any thing to be communicated, *that might tend to establish truth, extend knowledge, excite virtue, and promote happiness among mankind.*

With best wishes for your success, I am, Sir, your most ob't h'ble serv't, GO. WASHINGTON.

Mr. Mathew Carey.

In conclusion, we present a highly poetical invocation to

NIGHT.

WHY should I seek my rest?
My thoughts are tranquil now;
And pleasant scenes in Memory's track,
And gentle hours come thronging back,
Forgotten long ago—
Till dreaming, waking, I am blest!

The holy, pensive Night!
Away with sleep for me—
I love the thoughts that round me press,
The mystery, and the loneliness—
The varied fantasy
That come when vanishes the light.

The day! the day! I fear!
With all its bitter, 'carking care,'
Its weary round of toil—its gain,
Its strife, its pleasure, and its pain—
Its many thorns, that wear
Into the struggling soul, and rankle there.

Its heartless, hollow mirth,
Its tempting voice, that to the ear will come;
'Tis gay delusions, soon to pass away—
Before the sun-set tells of closing day:
Its rudely mingled hum,
Bringing the soaring spirit to the earth.

Oh no! the busy day
Hath few bright spells, like thee, most holy Night—
Few dreams of Heaven—no deep and thrilling tone,
Soothing the chilled heart and the spirit lone:
Telling of worlds of light,
Where yet our wandering steps may find a way.

Deep night! One breath of thine
On the flushed brow, falls like a cheerful spell;
There drops a healing balsam from thy wing:
A gift of thought, of peace, 'tis thine to bring,
Sounding the heart's deep well—
Lighting its depths with many a ray divine!

Then shall I call it given
For sleep, and seek my rest, this holy time—
While the deep stars are looking from on high,
Stop the thrilling ear and close the musing eye?
Is there not now some heart that once with mine
Did mingle, watching the wide, solemn heaven?

Give me, fond Memory, but one music tone—
Give *one* bright presence back. Now wave thy wand!
Yet rain upon the ruined shrine thy glow,
As if upon the sweet wild flowers that blow
Far midst the rocky cliffs, in mine own land,
Freshly and fair—the passing moon beams shone.

Oh Night! thine is the power
To call long vanished scenes around the soul,
With a new beauty—link the broken chain
Once more, and weave the silken bond again,
That o'er our spirits held a blest control,
In youth's fair morning hour.

Then is it not most meet
That to the dreamer o'er vain hopes, but high,
And to the seeker after visions gone—
The pensive, lonely wanderer, whose home
Gleams not as once upon his waking eye,
Night *should* be sweet?

This number of the *New England Magazine* is, as usual, well sustained. None of the papers heretofore objected to by a correspondent of this paper, calculated to infuse a spirit of religious scepticism, appear.

There are many good articles—among them a just and well written biographical memoir of Dr. J. W. Francis, of this city, from which we purposed to make a long extract, but the foreign news prevents.

We insert the following short and lively paper:

My System of Philosophy.

There is nothing in heaven or earth not treated of in my Philosophy.

I have invented a new system of Philosophy, and I am happy to announce to the public the completely satisfactory termination of my labors on this subject. I first modeled it ten years ago. I have fulfilled to the letter the injunction of the ancient poet, Horatius Flaccus, namely, to keep my work nine years before publishing. In the mean time it has received all the reviews, revisions, alterations, amendments, and improvements, that human ingenuity could suggest or devise. It is now perfect.

I have given this system the name of *Phrenodontology*, a name derived from three Greek words, signifying the mind, a tooth, and the word or doctrine. (I explain for the benefit of the unlearned, as this system is of universal application.) "Phrenodontology," therefore, means the doctrine of the mind in connection with the teeth—and not, as some trifling minds would interpret it, "in the teeth of Phrenology." This system is *not* in the teeth of Phrenology. It does away, entirely, Phrenology, Materialism, Idealism, Scepticism, and all other similar vanities. The questions will not be asked—"Are you a Phrenodontologist?" "Are you a disciple of *the great** Dr. Glanzknecht, the father of Phrenodontology?" "Do you believe in Phrenodontology?" It may possibly be asked in the wilds of Ethiopia, "Have you heard of *the System?*" But even this will soon cease to require an answer. Every body will know, every body will believe, every body will practice it. It is, consequently, far beyond the reach of criticism or satire.

I perceive the reader is impatient to know more of this truly wonderful science. One instant more, and I will commence some account of it. But first I wish to take notice of an objection to the name I have given it—an objection to the *name*, (observe, gentle reader,) to the name, and not to the science. Some minds of little thought and slow observation have remarked, that, from the similarity of the name, *Phrenodontology* might be confounded with Phrenology. If there be any, who, upon second thought, come to such a conclusion, let them read the tenth sentence in this article, and be convinced that their conclusion is incorrect. Now for the doctrines:—

First. The mind of man is situated in, and developed upon, his teeth. Here the question arises—"What is the mind?" I answer, the compound of all mental and moral qualities, propensities and sentiments. This is evident, *for*, if it be asked, "What is the compound of all mental and moral qualities, propensities, and sentiments?" what but the mind? Any one, therefore, who doubts the truth of my definition of the mind, should be placed, as soon as may be, in the hospital for idiots, for the foundation of which hospital—to be conducted upon purely Phrenodontological principles—I have made a provision of one hundred and thirty thousand dollars in my will. (I wish I could afford to have it put in operation now; but as I have not yet received from the government of any of the nations of the earth, the pensions they will undoubtedly award me, on the receipt and knowledge of my system, I think the scheme impracticable.)

"The mind of man lies in his teeth." This proposition requires no proof. As soon as it is stated, we perceive the utter absurdity of the doctrine inculcated by the Phrenologists, and so generally believed, that *the brain* is the seat of the mind. If facts, however, are required, we can state them. The only difficulty is in selecting from the vast mass with which we are surrounded. I will relate a circumstance which once happened to myself, and by which I nearly lost my life. It was about eight years ago—two years after I had discovered my system. Had I lost my life before my system was revealed to the world—but no—I'll not dwell upon the thought.

I was walking along the street, one day, when I observed a man approaching me, who, as I judged from the shape of his face, had a remarkable protuberance in the internal dexter corner of the second molar of the left lower jaw, where is situated the organ that would make a man a murderer. I should have avoided him, had my *caution*† been great. As it was, my curiosity being far more developed, I approached, and stopped him. "Bless me!" said I, "my dear sir, will you have the kindness to let me look at your mouth a moment?" His looks expressed what I then took to be surprize, but what, upon recollection, I am satisfied must have been *demoniacal rage and malice.* Further than this, he made me no answer, but opened his mouth in such a manner as a shark would, when about to bite a man's head off. I have, a thousand times since, shuddered at the thought of my situation at that moment. It was as I had supposed,—the organ of murder was *horribly* developed. "Well, sir,', said he, in a voice of thunder, "what is the result of your examination of my mouth?" "I should think, sir," was my reply, "that you were more likely to have committed a murder than any person of my acquaintance." "What, sir," said he, "do you——" "It is a fact, sir," said I, "for——" I should have said more, but he gave me such a blow, that it laid me stunned upon the pavement, thus showing to all, what I was perfectly aware of before, viz. his murderous disposition. I have never met this man since, and I have no doubt that he was a murderer, escaped from justice. My fall however, proved a fortunate one for me, for it knocked out one of my front teeth, containing the organ of avarice. Before this fall, I was, it must be confessed, exceedingly avaricious,—afterwards the propensity left me entirely.

This leads me to state a fact that is, probably, unknown to most of the world. Every body has heard of the horse whom his master taught to live on shavings, but who, unfortunately for the cause of the experiment, died soon after he had acquired that faculty. Well; *that horse belonged to me, and I was the master, who succeeded in teaching him this mode of nourishing himself.* The way it happened was as follows:—I had observed one day, (it was just after the discovery of Phrenodontology,) that this horse had the organ of docility, which is situated in one of the incisters of the upper jaw, very prominently developed. My avarice suggested to me the idea of teaching him to live upon shavings alone. He soon acquired the power, but (alas!) died soon after. I discovered, after his death, that his organ of vitativeness was extremely small. I have his jaws in my collection, which the curious are invited to call and see. Since the loss of my avarice, my curiosity and my love of science would have led me to try the same experiment with another horse; but I never have been able to find one equal in docility to my lost nag.

A lady once informed me that one of her sons had a propensity to steal. He would steal any thing and every thing that came in his way; and she applied to me, as she said, because she knew me to be versed in matters of the mind, and she wished me to devise some punishment for her son, that would be likely to effect a change in his mind. I requested leave to examine his teeth. The boy was sent for, although the mother could not see what his teeth had to do with his thievery. I examined his Phrenodontological development, and found the organ I expected prominent. I immediately advised his mother to have one of his bicuspidate teeth extracted. The operation was performed and the boy has not been known to steal since.

Having proved this point, then we come to the second proposition. But no,—I ought not to go any farther with this,—for I would not deprive any one of any of the pleasures they will derive from the perusal of my work,—the "Outlines of the System of Phrenodontology"—now offered to the world, and for sale at any of the bookstores. I am naturally inclined to be prolix. I once made a stump speech nine hours long, and, probably, should not have stopped then had not I been arrested and sent to Bedlam for an insane man. But in my "Outlines,"—which the reader had better buy immediately,—I have, I fear, been too concise, the whole work being comprized in one small printed folio volume of seven thousand pages. Only think, gentle reader, but seven thousand small printed folio pages, upon such a subject as PHRENODONTOLOGY.

NEW YORK LITERARY GAZETTE, &c. edited by A. D. PATTERSON.—In a large 4to. form, this new candidate for public favor presents itself, with all the aids of external embellishment, good type and good paper. Its criticisms, too, though not evincing any remarkable vigor of style, or labor of research and comparison, are fair enough—excepting that on the little volume of "Things as they Are," in which, passing over what is really clever, fresh, and original, in its pages, the critic pounces with all his might upon the errors of haste, and, occasionally, of bad taste.

The Gazette is to appear semi-monthly, at the cost of 12 1-2 cents.

* I am happy to be able to assume this title without *vanity*, of which quality my Phrenodontological development shows that I have none. It is a title which must be universally accorded to me.

† I have adopted many terms from the late science of Phrenology, as I find them convenient; and the science, being superseded and defunct, has no further use for them.

It is proposed to publish by subscription an English translation, made in this country of "My Prisons," by Silvio Pellico, and of the "Additions" to that work by Pietro Maroncelli, for the benefit of the latter gentleman, now a dweller among us. Subscription lists will be found in the Athenæum and the office of this Gazette. It seems hardly necessary to express a hope that this undertaking will meet with complete success. Americans, especially, must sympathize with the unfortunate and distinguished individuals who for so long a period were the victims of despotic persecution on account of their liberal principles.

Signor Maroncelli is an object of the strongest interest from his history; and he is every way worthy of the utmost consideration on account of his private virtues, his high endowments and extensive attainments. Such a refugee from the tyranny of the old world, may be deemed to have a positive claim upon us for protection and assistance. He has been, as it were, the advocate and defender of our institutions abroad, and has testified his devotion to them with a martyr's spirit and constancy. It ought to be proved to him that his merits in this respect are fully appreciated. The cause for which he suffered is our cause, and it behoves us to make manifest the gratitude we should feel for his efforts in its favor, as well as the commiseration we experience for the misfortunes which they produced.

We extract the above announcement from the National Gazette, and, concurring as we do in what is so well and justly said of Signor *Maroncelli*, and of the cause in which he suffered, we shall take the greatest pleasure in aiding such a publication for his benefit.

FOREIGN INTELLIGENCE.

Two Days Later from England.—By the *St. Andrew* from Liverpool, papers of 30th from London and 31st from Liverpool are received.

It was expected that Parliament would be prorogued on or before the 12th of August.

The bill for the admission of Dissenters to the Universities, was passed in the House of Commons, July 29th, and sent to the Lords. On the same day the Irish Coercion bill was ordered to a third reading.

In Madrid, the ravages of the Cholera had been deplorable The population of that city, including the ordinary number of strangers, soldiers and clergy, is under 200,000—out of which, the daily mortality for some days exceeded 400.

The young King Otho, of Greece, seems to experience difficulties from his revolted *Mainote subjects*. In an attempt to put down the insurgent Maniotes, a large body of government troops were abliged to capitulate.

Earl Bathurst, formerly Secretary of the Colonial Department, died at his residence in London, July 27th.

The Earl of Oxford has paid all his creditors. The estates have been at nurse for a quarter of a century, and during that long period his Lordship has been in seclusion. Haywood Hall, a romantic place in the midst of a wood, has been his dwelling.

The St. Petersburg papers announce the arrival of Captain Ross in that city.

Passengers may now travel in about twenty-seven hours from London to Brussels.

In the year ending Jan. 5, 1833, the quantity of wool exported from Sidney, New South Wales, was 1,334,948 lbs.; in the year ending January 5 1834, the total quantity exported was 1,784,203 lbs.

Hobart Town papers estimate the total value of articles of colonial produce, exported from Van Diemen's Land in the year 1833 at £152,966, and of the imports, consisting chiefly of British manufacture, during the same period, at £352,864.

The ports of Greenock and Port Glasgow have been approved of by the Lords of the Treasury as ports for the importation and warehousing of tea.

Cherries have not been so plentiful in Kent for the last fifty years. They are hawked about at Maidstone, literally in cart loads, at a penny per pound.—The crop of apples is also good, but pears, plums, and filberts are a failure.

At the recent exhibition of manufactures in Paris, the King of the French conferred the decoration of the Legion of Honor on Mr. Pierre Erard, the celebrated harp and pianofort manufacturer.

A gentleman named Young, residing at Main, Elgin, has in his possession a sparrow perfectly white. He secured it when going to roost one evening, and it is now quite tame.

The King of Prussia has conferred upon Baron Nathaniel Von Rothschild, the title of "Secret Counsellor of Commerce."

Charles X. has bought the domain of Nachod, in Bohemia, for 2,500,000 florins. This estate was said to comprise more than 40,000 inhabitants, and to confer almost absolute sovereignty on its proprietor. The Ex-King may therefore still play the Monarch on a small scale.

Anonymous Wine.—On Lord Byron's favorite servant one day opening a bottle of wine in Greece, his lordship questioned him as to its name and lineage, of both of which Fletcher acknowledged his ignorance. "Then away with it," rejoined Byron, "I hate anonymous wine."

Fifteen persons were killed lately at Stradella, in Piedmont, by the falling of a church tower, a short time before divine service.

Elisondo, in the North of Spain, which Don Carlos has made his head quarters, is a small town at the left bank of the Bidassoa, the chief place of the valley of Bastan, and eight leagues and a half north of of Pampeluna.

Letters written from Gibraltar by the Neapolita Consul, and received at Marseilles, announce that peace has been concluded between the King of the two Sicilies and the Emperor of Morocco.

Demoralized state of the British Army.—Mr. Ellice has informed the House of Commons, that "in the last two years one fifth of the whole Army on English stations has passed through the public gaols." One fifth in two years is the same as the tenth annually; and this presents to be sure a pretty picture.

Mr. George Thompson, the eloquent lecturer against slavery in the British Colonies, will embark at Liverpool for the United States on the 8th of August, there to exert his talents in behalf of the unfortunate beings oppressed by republican freemen.—

So says an English journal. We say, he'd better stay at home.

Monument to the Memory of Mr. Canning—In addition to the bronze colossal figure erected about two years ago in the enclosure fronting Palace-yard, a beautiful marble statue of this distinguished individual, by Chantrey, has just been erected in Westminister Abbey, the expense of both being defrayed by a public subscription, which was raised for the purpose among his friends and admirers, at the time of his decease, and which amounted to upwards of £11,000.

Here is a sum of $50,000 nearly, paid by a few admirers of *George Canning*, in order to construct a monument to his memory; while by this nation, led to Independence by George Washington, no monument has been erected to his name.

The Reformed House of Commons differs in many of its scenes, certainly, from the more measured and staid character of former Houses. On a recent occasion, while discussing the Irish Tithe bill, Mr. *O'Connell* proposed an amendment, which he thus sustained:

The object of his amendment was to relieve the tithe-owners immediately, to the extent of 40 per cent. If thi plan should render it necessary to draw upon the Consolidated Fund for a small amount, the people of England would not begrudge it, in order to effect the settlement of this important and difficult question. (An expression of dissent from the Ministerial benches.) "Oh!" exclaimed the Hon. and Learned Member, "Oh, I wish we were blacks!—(A laugh.) If the Irish people were but black, we should have the Hon. Member for Weymouth coming down as large as life—(Laughter)—supported by all 'the friends of humanity' in the back rows, to advocate their cause. (Cheers and laughter.) They would think little of 120,000*l.* or 1,000,000*l.*, if it were to be given to 'the sweet lovely blacks of Ireland.'" (Continued laughter.) The Hon. and Learned Member concluded by moving an amendto the effect before stated.

Mr. Spring Rice and others on the Ministerial benches feebly opposed the amendment.

The Committee then divided, when there appeared—

For the amendment	82
Against it	33
Majority against Ministers	—49

The announcement of this division was received with cheers.

Lord Althorp then proposed that the other clauses connected with this part of the bill should be postponed for the present. The decision to which the Committee had just come deranged most of the details of the bill. The alteration thus made in the bill would carry the principle of the bill more rapidly into effect than he considered prudent.

Mr. O'Connell said, that whatever course the noble Lord might think it right to adopt after this decision, this was clear—that it was the duty of those who had supported the amendment which had just been carried to give every aid to the noble Lord in forming the new machinery of the bill, and in seeing whether this experiment could not be carried fully and fairly into effect. He should consider it to be his sacred duty to give the noble Lord every support in his power upon this very important subject.

Mr. Shaw said, that after the opposition which the honorable and learned gentleman had received from government, it was undoubtedly his duty to give the government his support. (Hear, hear.)

Lord Althorp hoped that the Hon. and Learned Recorder for Dublin did not mean to insinuate that his opposition to this amendment had not been sincere. (Hear.) The Hon. and Learned Gentleman seemed to have forggotton that Ministers had it no longer in their power to command willing majorities, in consequence of the changes made in the constitution of the House by the Reform Bill. (Loud cheers.) He was ready to admit that, on occasions where a great principle had been involved, and where, if the motion had been carried against the Ministers, Ministers could not have continued to carry on the business of the country, he had expressed in the House a determination to resign, if the question were decided against them. But on the details of a measure merely carrying out a principle of which he approved, more rapidly than he thought advisable, he should have been ashamed of himself if he had had recourse to the inducements of which he had availed himself on former occasions.

Mr. Shaw had no intention to question the sincerity of the noble Lord. (Hear, hear.) But he must again say that, notwithstanding the large, and he was sorry to add, the overbearing majority against Ministers, he could not bring himself to believe that Ministers generally wished the decision on this amendment to be such as the noble Lord wished it to be. (Hear, hear.) He believed that many gentlemen who usually supported Ministers, had avowed that, on this question, Ministers wished to be beaten. (Loud cries of "Name.")

Mr. Ireton said, that a supporter of the Government had that day asked him how he intended to vote upon this amendment. He had replied, that he did not think that he should vote at all; but that, if he did vote, he should vote in favor of Ministers. The gentleman told him immediately that he need not give himself that trouble, for the Ministers wished to be beaten. (Loud cries of "Hear," and of "Name, name.")

Lord Althorp said it was true that he had not desired any Irish members to vote in favor of the original clause; but it did not follow therefrom that he wished the clause to be lost. On the contrary, he wished it to be carried, as he thought that it would prove beneficial to Ireland. (Hear.)

The amendment was then put and carried.

The avowal of Lord Althorp that minorities could no longer control majorities, as in former days—the *nonchalance* of Mr. Ireton, whose vote seemed a matter of as much indifference to ministers as to himself,—and the character of the whole proceeding here recorded, are novelties in St. Stephen's Chapel.

The Reformed House of Commons.—We annex another illustration of the working of the House, which used to be called an assembly of the "first gentlemen in England." It is to be remarked, however, to the credit of those whom Reform has introduced to the House, that they seem by common consent to be exempted from any participation in disorderly scenes of the nature of those recorded below. The disturbers are, for the most part, young sprigs of fashion.

[*From the London Courier, of July* 29.]

The debate being on the question of admitting Dissenters to the University, and having been got at somewhat late in the evening,

Lord Palmerston, rose amidst most discordant sounds. The noble Lord said the argument of the last Right Hon. speaker was founded on this—that it was incompatible with the religious principles which formed the groundwork of the Universities, that persons differing from those principles should be empowered to partake of the advantages they offered. That was his argument; and he should cut it from under him with one simple remark. (Coughing, scraping of feet, and expectoration.) How did the Right Hon. Gentleman reconcile his argument with the practice? (Uproar.) Dissenters could have the benefit of education at Cambridge as completely now, as they could under the provisions of the bill which they were then discussing. But it was said that the measure before them was subversive of the true interests of the State. (Coughing, and vehement cries of bah, divide, divide.) He denied that it was so, and would declare his honest opinion, that it would tend to strengthen and perpetuate those great interests. He really could not see on what ground those who consented to the repeal of the Test and Corporation Acts, and the emancipation of the Catholics, opposed this act of substantial justice.—(Great uproar and yelling.

Sir R. Inglis essayed to address the House, but for many seconds his words were completely drowned in the noise. The Right Hon. Baronet was understood to declare that whatever might be thought of the authorities of the Universities, they would be found to act from conscientious motives, and on lofty principles. He could very well believe that a Whig would prefer place to principle—(Cheers and confusion)—that he would betray the latter at any sacrifice, to secure the former; but not so with the men to whom he (Sir R.) alluded.

Mr. G. W. Wood rose to reply. (The laughing, jeering, shouting, and coughing, were such as has seldom been witnessed.) The Hon. gentleman said it had been declared that the bill in its present stage was essentially different from what it was when he had the honor to introduce it to the House. (At this moment two Hon. members suddenly entered from the smoking room into the Opposition gallery, and stretching themselves at full length on the seats, secure from the observation of the Speaker, commenced a row of the most discreditable character.) This he denied—("I say, can't you crow?" laughter and uproar). The provisions had not been altered—("Hear him how he reads"—Mr. Wood occasionally glanced at a memorandum in his hand)—the enactments were in every respect unaltered. (Loud cheering, followed by bursts of laughter). The question was—"Read it, read it!" and a great uproar)—the question—("Just so, read it!")—the question was—(Great cheering and laughter)—whether—("That's the question")—whether the Universities should be open to all, or be for ever under the control of mere monopolists—("Where's the man what crows!" laughter and loud cries of "Order" from the Speaker). Public opinion—("Oh, dear," and great uproar, during which the Speaker, evidently excited, was loudly calling for order, and turning his glass in every direction to note the delinquent members)—public opinion was decidedly in favor of this bill. (The scene here was indescribable.)

The Speaker rose, and with much indignation in his tone and manner said, "I really think that some one among those who are calling out in this strange and unparliamentary manner, would better satisfy the Hon. members with whom he is acting by moving at once that the debate be adjourned, than by taking a course of opposition which is so greatly at variance with the established usages of the House." (Loud cheers.)

Mr. G. W. Wood resumed.

There have been *scenes* in our House of Representatives, but nothing like this.

By the Charlemagne we have the King of France's speech on opening the Session of the Chamber. It is even more unmeaning than such documents usually are.

The "three days" of Paris had been celebrated; but, as we infer, with diminishing interest. There is indeed little left for rejoicing, to those who looked to the result of the resolution achieved in those days for a more liberal form of government than that which they overthrew. The nation, however, at large, was never more prosperous or more powerful.

HOLLAND.

PARIS, 31st JULY.—Important news is brought by the Holland papers of the 28th July, received by express. We read in the *Hendelsblad*—"We are informed of good authority, that on the 22d, the King had issued a decree by which all the members of the schuttery (National Guard) have been sent home, with unlimited leave of absence."

DON CARLOS.—It is now again *certain*—if there be any faith in telegraphic despatches—that this Pretender is within the borders of Spain; though from the annexed description of the place where we was at the latest dates—taken from the Journal des Debats of the 30th July—he was, it appears, so near the French frontiers, that a short run only would be requisite, in case of need, to save him from the clutches of the Queen's troops:

Lezaca, where Don Carlos was on the 28th July, is a little hamlet on the left bank of the Bidassoa, one league south of Vera, upon the road from Bayonne to Pampeluna, and a league and a half [about our of our miles] from Biriaton, the first village in France, which is now occupied by a battalion of the 4th Light Infantry.

PARIS, JULY 30.—The Government received yesterday morning the following telegraphic despatch of the 28th instant from Bayonne:—"Don Carlos arrived yesterday at Lesaca, near our frontier. Zavala with the Biscayans is near Oyarzem, and El Pastor is marching against him. Rodil is in the Borunda endeavoring to block up Zumalacarreguy, who is near Lecumberg. Some result is expected to-morrow."

A second telegraphic despatch, dated Madrid, 24th July at five in the evening, announces that the Regent had opened the Cortes in person at one o'clock of the same day, and that Madrid was perfectly tranquil.

PARIS, JULY 31.—No important news from Spain has been received to-day. The *Journal des Debates* announces that bands of Carlists have appeared in Caledonia.

FROM JAMAICA.—The *John W. Cater* from Kingston, (Jamaica,) brings papers of 15th ult., which prove that in the large Colony where slaves were so numerous, the emancipation law had gone into effect without disturbances of any significance. This is intelligence that must gratify all right thinking men.

The Despatch one of the warmest Journals in the Island in opposition to the plan, says:

"We have devoted a large portion of our columns to the accounts received from the country relative to the state of the apprentices, from which our readers will observe things is going on as well as the most sanguine patriot could wish. We have seen letters from every parish in the island on this all engrossing subject, and the writers are unanimous in declaring that the laborers went to their work on Monday with the utmost alacrity, and were going on with their work in the usual manner. No doubts were expressed of the new system, and we congratulate the inhabitants at large on the prospects we have now before us. Let us, however, continue on the alert, as we have dangerous and disappointed characters among us, whose sole object is agitation in the hope of being able to create an ill-feeling between the masters and their servants. In this, however, from what we have heard, they must fail in every instance where proper pains has been taken to explain the nature of the tie which at present binds them to each other. The laws are sufficiently strong to coerce the unruly, and to protect the industrious from ill treatment; and if this fact is strongly impressed on the minds of the apprentices, there is no doubt they will patiently await the hour of their emancipation, and by their zeal and assiduity in the fulfilment of their prescribed duties; and their respectful bearing towards their superiors and employers, justify the confidence which has been reposed in them.

SUMMARY.

The steam packet David Brown left Charleston on the 3d inst., but put back in consequence of some damage to the machinery. Would leave again on the 6th, for this port, via Old Point Comfort.

Letters have been received at the Navy Department from *D. Deacon*, Esq., commanding the U. S. frigate *Brandywine*, announcing her safe arrival at Rio Janeiro, after a run of fifty days from the Capes of the Chesapeake.

The Convention of the People of the State of Tennessee, which has been in constant session in Nashville since the 19th of May last, closed its labors on Saturday the 30th of August. They have adopted a revised and *amended* Constitution, which will be immediately submitted to the people, by the circulation of fifteen thousand copies of it, side by side with the old Constitution, for their ratification or rejection at an election to be held for that purpose on the first Tuesday and Friday in March next.

BATTLE WITH THE PAWNEES.—The following highly interesting information is furnished by the Arkansas Gazette of the 19th ult.

Desperate Engagement between the United States Dragoons and Pawnee Indians.—By a gentleman from Washington county, we learn that the United States Dragoons have recently had a bloody fight with the Pawnee Indians, in which the latter lost 80 killed and 150 prisoners. Our informant derived his information from a young man who was at Fort Gibson when the prisoners were brought in under the escort of a detachment of the Dragoons. The remainder of the United States forces belonging to the exploring party, were left in pursuit of the Indians. The Pawnees are said to have fought desperately, and to have killed eight of the Dragoons. Several Osage prisoners were retaken at the same time, from whom it was pretty satisfactorily ascertained, that the young man whom the Pawnees took from the Rangers last summer, had been killed.—These are the only particulars that our informant was able to collect. To-day's mail, or that of Saturday next, we hope will furnish the details of this affair.

BROWN UNIVERSITY.—The Hon. Asher Robbins delivered an oration, and the Hon. Tristam Burges, a poem, before the Phi Beta Kappa Society on Tuesday. The Providence Journal says—

Those who sat near enough to the pulpit to hear both the oration and the Poem, enjoyed a rare intellectual entertainment—and the large number to whom the learned orator failed to make himself audible must have been amply repaid for their patient attention by the beautiful, dignified and pathetic poem of Mr. Burges.

The Hon Mr. Robbins exhibited, in the treatment of his subject, (the importance of a National Literature) more than he has done on any former occasion that we are aware of, the profundity of his classical acquirements, for which he was already distinguished.

FLORA MACDONALD.—All our readers know the romantic heroism with which this young woman, Flora MacDonald, conducted the escape of Prince Charles Edward from Scotland, after the fatal battle of Culloden. It is not so well known that she was long afterwards a resident of North Carolina; and—adhering to the principle of loyalty which in early life taught her to hazard every thing in the cause of the Royal Stuarts—she, on the breaking out of the American revolution, took sides for the King.

The true sentiment of honor and duty is well expressed in the last lines of the subjoined reflections of *Chateaubriand*. Travelling in the wilds of this country,—then a young man and a soldier, and attached by sentiment and social position to the cause of the monarchy,—he learned from a newspaper casually thrown in his way the flight of Louis XVI. from Paris, his arrest at Varennes, and subsequent imprisonment in the capital. Instantly abandoning all his plans, he returned to offer his arms to his Sovereign. He met with much hardship and little gratitude; whereupon he thus soliloquizes:

"The Bourbons had not need, that a cadet of Brittany should return from beyond the seas to offer them his obscure devotion: if I had lit the lamp of my hostess with the journal which changed the destinies of my life, and continued my voyage, no one would have perceived my absence, for none knew that I existed. It was a simple question between me and my conscience which brought me back to the theatre of the world. I might have done as I wished, as I was the only witness of the debate. *But of all witnesses this is the one before which I should fear most to blush.*"

Toledo Gazette.—Nothing (says the Cincinnati Gazette) marks more strongly the current of population and improvement setting North-west, than the growing up of new towns, and the appearance of newspapers. A day or two ago we received the first number of the Toledo Gazette, dated August 14. The subjoined extract informs where Toledo is, and what it has been.

"Our Place.—This town, lately called by the two appellations of Port Lawrence and Vistula, is handsomely situated upon the north west bank of the Maumee River in Michigan. The interests of these two points, as above described, are the same, inasmuch as they are dependent upon the same section of the country for support, and possess in all respects the same local advantages. The town is laid out upon a liberal and judicious scale, with wide and spacious streets, cutting each other at right angles, with intervening alleys two rods wide. It is about four miles from the entrance of the river into Maumee Bay. From this point to the Lake, the navigation has no obstruction to vessels and steamboats of the largest class, and the harbor is perhaps the best and easiest made of any on the Lake. There is no perceptible current in the river, as at this point it is on a level with the Lake, except such as is produced by the wind, and of course the waters here are not affected by freshets or rains. The depth and width of the river are such as to enable vessels to beat up, or down against a strong wind, it being about three-fourths of a mile wide, and of an average depth of twelve feet. The easterly part of the town, latterly called Vistula, became the property of the present proprietors in August, 1833; and a few lots were sold last fall. Early this spring, sales commenced, and have briskly continued.

There is no place in the western part of the Union that possesses greater advantages of location than this. We are aware that in making this assertion we are saying a great deal, but for its truth we need only refer those who are acquainted with our position to a map of the country. On the north-west and south, we have the finest and most extensive agricultural districts, much of which is already thickly populated, and great numbers of emigrants are daily removing to our town and neighborhood. A survey is now being made of a route for a Railroad from this place to Adrian, in Lenawee county, 22 miles north-west.

The section of the Road, which is chartered to extend to the navigable waters of Lake Michigan, will be put under contract this fall, or early next spring.

[Communicated.]

In a very learned notice on "*Measures, Weights, and Money*," by Col. Pasley, Royal Engineers, F. R. S. &c., just published in London, the author pays the following tribute to our countryman John Q. Adams.

"I cannot, however, pass over the labors of former writers, without acknowledging in particular the benefit which I have derived, whilst investigating the historical part of my subject, from a book printed at Washington, in 1821, as an official Report upon Weights and Measures, made by a distinguished American statesman, Mr. John Quincy Adams, to the Senate of the United States, of which he was afterwards President. This author has thrown more light into the history of our old English Weights and Measures, than all former writers upon the same subject, and his views of historical facts, even when occasionally in opposition to the Reports of our own Parliamentary Committees, appear to me to be the most correct. For my own part, I confess that I do not think I could have seen my way into the history of English Weights and Measures, in the feudal ages, without his guidance."

Such men as J. Q. Adams are honors, not to their country only, but the empire of learning. How infinitely above the knaves and dunces now most prominent in governing the country—the counterpart of the gentry of whom Cicero said, "ad honores adipiscendos, et ad rempublicam gerendam nudè veniunt—nulla eognitione rerum—nulla sclentia ornati."—They have to be sure figured in the annals of Cabinet Literature, but it was only to show "with how little wisdom the world is governed."

Boston.—The ship Dover, arrived at this port last evening from Calcutta, having on board a fine large elephant eighteen years old. A Rhinoceros was also shipped, but died on the passage.

Prince Puckler Muskau.—This distinguished, spirited, and intelligent traveller, may be daily looked for upon our shores. A letter from Bavaria, from which we subjoin an extract, apprises us that he would embark for this port in the Havre packet of the 8th ult.

He will find a cordial welcome, and, we fear,—seeing that it will all be put in a book,—a deference for his title, little in harmony with the republican professions of which he will hear and read so much.

Extract of a letter from Bamberg, Bavaria, of 24th July.

I beg in advance your good offices for his Highness, *Prince Puckler Muskau*, who has spent some weeks with me here, and intends making a tour through the United States, when he will spend some weeks in New York. He will embark in the Havre packet of 8th August.

[*From the Alabama Advocate.*]

Westpoint Academy.—The report of the Visiters to this institution will be found in our paper to-day, and exhibits its past and probable benefits to our country in a very flattering aspect. We regret that the voice of clamor and prejudice should be raised against this national nursery of scholars and soldiers, which appears to us, while it continues to be as judiciously managed as it has been, capable of furnishing many bright and useful ornaments, not only to the scientific and military departments of our Government, but even to the social and intellectual circles of life. There is no college in our country where mathematical science is more profoundly and accurately taught—none where discipline is more perfect—none where there is a more complete and vigorous development of the physical powers. If to blend the sympathies of young minds with the rising glory of the nation; if to inspire noble, generous and elevated sentiments of honor; if to be educated *by* the country *for* the country; if to cherish a high and chivalrous reliance upon the skill and valor of our own officers, are objects worthy of national care and consideration, surely this institution eminently merits the support and encouragement which it has hitherto received. It has been made a ground of objection to this Academy, that its favors have been conferred too exclusively upon influential and wealthy families. We apprehend that this spirit of imputed favoritism has been very much exaggerated. Perhaps the error lies in wishing to make that a monopoly which was never intended to be such.

Was this institution established as a public charity, where the *poor* only were to be educated? Such, we presume, was not the sole and primary object of its organization. It was to draw out and foster the common talent of the nation, come from what sphere it might, and array it, when occasion required, in defence of Liberty and the Constitution. We should undoubtedly prefer that much the largest proportion of students should be taken from that class who are destitute of the means of obtaining a liberal education. Not that they should look upon it as a favor to which they are exclusively entitled; but because the boundaries of knowledge are thereby widened, and the sympathies of minds, thus nurtured at the public expense, will become more closely entwined with the institutions of our land—the sentiment of gratitude will be deeper and stronger towards a government which scatters, with a benignant hand, the lights of virtue and intelligence among its most obscure and unfriended citizens.

[*From the (Ostego) Cooperstown Republican.*]

"Templeton Hall."—This venerable mansion, once the residence of Judge Cooper—the "Judge Templeton" of the "Pioneers"—has lately been purchased by his son, *James Fenimore Cooper*. For several years it has been almost wholly unoccupied, and has suffered much from the weather—the walls however are still good, and the whole building is to be thoroughly repaired and fitted up for the future residence of Mr. Cooper. We welcome him back to the home of his youth, and hope he may spend many pleasant years amid the scenes which his pen has immortalized.

[*From the Philadelphia National Gazeite.*]

It is with deep regret that we record the death of Don Juan Bautista Bernabeu, His Catholic Majesty's Consul General for the United States. This distinguished gentleman sunk, on the 3d inst., under a very painful malady, which he bore for a long time with exemplary fortitude. He was born at Alicant, in Spain on the 14th June 1772, and served his King, in honorable stations, upwards of forty years. A more loyal and zealous Spaniard never lived; and if enthusiastic devotion *to the* character and welfare of his country, and a thorough performance of official duties give title to favors from the Spanish government, his very respectable family may claim much on his account, from its gratitude, justice, and liberality.

The Blind Man's Bible.—We have before us, in a goodly quarto volume, the Gospel of St. Mark, printed, or rather embossed, for the use of the blind. This is the first book that has been prepared in this country, on this plan. It is the handy work of Mr. Snider, the gentleman who acts as secretary of the institution, and is a beautiful illustration, if not fulfilment, of the prophecy, that the "the blind shall see." This admirable specimen of the art of embossing letters, is worthy the attention of the curious.—[U. S. Gaz.]

The Norfolk Herald of Friday last, notices, with great satisfaction, the arrival there of a locomotive engine, long expected from Philadelphia, for the Portsmouth and Roanoke rail-road, and talks of riding *in an hour* to Suffolk, which used to be deemed as much of an undertaking as a trip to Richmond now is.

Wreck of the ship New Jersey of Providence.—The ship Bashaw, Captain Blacklor, arrived at Boston, last Thursday from Batavia, and has communicated to the editor of the Commercial Gazette the following particulars:

"The English brig Reliance has been lost on Louisa Shoal, while employed in saving the property of the American ship New Jersey, wrecked there in November last. The English ship Madeline accompanied the Reliance in the wrecking expedition, had returned to Singapore with the crew and merchandize saved by both vessels, which, together with two boxes of dollars, amounted to about 40,000.—The property saved on a previous expedition amounted to about $9000. The remainder of the specie and some quicksilver were still left on the shoal, and another expedition was about ready to proceed in March with apparatus for blowing up the lower decks of the New Jersey, when it was expected there would be nothing to prevent their obtaining the rest of the property, the season of the year being favorable. The property already saved had been equally divided amoug the persons respectively concerned in the expedition without recourse to law and equity, and in such a manner as to prevent any further claim being made upon it."

Capture at sea and murder.—Another piece of information brought by Capt. Blacklor, is, that about the 16th of April, the English schooner Gem, of Leith, while on her way from Sourabaya, for New South Wales, was captured in the Sraits of Bally, by sixteen prow boats, and all hands murdered.

Hint for a "Cavalier Seul."—In certain cities of the south, where gentlemen having felt the icy chill of a refusal to an invitation to dance, where a lady who is declared to be engaging, declares herself engaged, a form is used which prevents any such disappointment. At the door of the *salon à danser* is a *corbeille* of artificial flowers, from which each visitor selects one and presents it to the lady of his choice. She wears the ornament in her *ceinture* until she has danced her two sets, and then returns it to her partner. Thus a lady who wears no bouquet is disengaged, and the offer of the flower saves the trouble of a speech and the pain of refusal.—[Le Cameleon.]

The *Berlin State Gazette* gives the following details upon the monument about to be raised to the memory of Guttenberg:—One of the bas-reliefs of the pedestal will represent Guttenberg showing to Faust the movable types he had invented, with an inscription underneath in Latin and in primitive-shaped letters, of the sublime sentence from Genesis—"God said let there be light, and there was light."—Another bas-relief will have engraved on it a representation of the first printing-press established by Guttenberg and his two partners. On a third bas-relief will be represented the distribution of the Holy Scriptures to the people.

Quite above board.—Samuel Terry, an English convict in New South Wales, is in possession of a clear income of sixty thousand pounds sterling. His several estates, containing upwards of 100,000 acres, and his property in the town of Sydney bring him in 10,000 pounds per annum. He has 17,000 heads of horned cattle, and 400 brood mares. All this property he has acquired since his emancipation.

[*From the New England Galaxy.*]

HUMAN LIFE,
OR THE FIRST AND LAST MINUTE.

Minutes Pass.—The anxious husband paces slowly across his study. He is a father, a man child is born unto him. Minutes pass—the child has been blessed by a parent, whom it cannot recognize, and pressed to that bosom, to which instinct alone guides for sustenance—the young wife too has faintly answered to a husband's questions, and felt his warm kiss on her forehead.

Hours pass.—The low moaning from the closely covered cradle, tells of the first wants of its occupant. The quiet tread of the nurse speaks of suffering around her: while her glad countenance says that the very suffering which she is trying to alleviate, is a source of joy; and the nameless articles, which from time to time she arranges on the hearth, tell of a new claimant for the courtesies and attentions of those who have progressed further on the pathway of existence.

Days pass.—Visiters are thronging the chamber, and the mother, pale and interesting after her recent sickness, is receiving their congratulations, and listening proudly to their praises of the little treasure, which lies asleep in its rocking bed at her feet.—The scene shifts, and the father is there with her alone, as the twilight deepens about them, while they are planning the future destiny of their child.

Weeks pass.—The eyes of the young mother are sparkling with health, and the rose blooms again on her cheek, and the cares of pleasure and home engage her attention, and the father is once more mingling with the world; yet they find many opportunities each day to visit the young inheritor of life; to watch over his dreamless slumber; to trace each other's looks in his countenance, and to ponder upon the felicity, of which he is the bearer to them.

Months Pass.—The cradle is deserted. But the chamber floor is strewed with play things, and there is a little one loitering among them, whose half lisped words and hearty laugh, and sunny countenance tell you that the entrance into life is over a pathway of flowers. The cradle is empty, but the last prayers of the parents are uttered over the small crib, which stands by their own bedside, and their latest attention is given to the peaceful breathings of its occupant.

Years Pass.—Childhood has strengthened into boyhood and gamboled along into manhood. Old connexions broken—parents are sleeping in their graves—new intimacies are formed—a new home is about him, new cares distract. He is abroad, struggling amid the business of life, or resting from it with those whom he has chosen from his own generation. Time is beginning to wrinkle his forehead, and thought has robbed his looks of their gaiety, and study has dimmed his eyes. Those who began life, after he had grown up, are fast crowding him out of it, and there are many claimants upon his industry and love for protection and support.

Years pass.—His own children have become men, and are quitting him, as he also quitted the home of his fathers. His steps have lost their elasticity—His hand has become familiar with his cane, to which he is obliged to trust in his walks. He has left the bustle which fatigned him. He looks anxiously in each day's paper among the deaths—and then ponders over the name of an old friend, and tries to persuade himself, that he is younger and stronger, and has a better hold upon life than any of his contemporaries.

Months pass.—He gradually diminishes the circle of his activity. He dislikes to go abroad, where he finds so many new faces, and he grieves to meet his former companions, after a short absence, they seem to have grown so old and infirm. Quiet enjoyments only are relished, a little conversation about old times—a sober game at whist—a religious treatise,—and early bed, form for him the sum total of his pleasure.

Weeks pass.—Infirmity keeps him in his chamber. His walks are limited to the small space between his easy chair and his bed. His swolled limbs are wrapped in flannels. His sight is failing—his ears refuse their duty, and his cup is but half filled, since otherwise, his shaking hands cannot carry it to his shrunk lips, without spilling its contents. His powers are weakened—his faculties are blunted—his strength is lost.

Days pass.—The old man does not leave his bed—his memory is failing—he talks, but cannot be understood—he asks questions, but they relate to the transactions of a former generation—he speaks of occurrences, but the recollection of no one arround him can go back to their scenes—he seems to commune with comrades, but when he names them, it is found that the waters of time and oblivion have covered their tombs.

Hours pass.—The taper grows dimmer and dimmer—the machinery moves yet more and more slowly—the sands are fewer as they measure the allotted span. The motion of those about him is unheeded, or becomes a vexation. Each fresh inquiry after his health is a knell. The springs of life can no longer force on its wheels—the "silver cord" is fast untwisting—the pitcher is broken at the fountain—and time "is a burthen." His children are about him, but he heeds them not—his friends are near, but he does not recognize them. The circle is completed. The course is run, and utter weakness brings the damp, which ushers in the night of death.

Minutes pass.—His breathing grows softer and lower—his pulse beats fainter and feebler. Those around him are listening, but cannot tell when they cease. The embers are burnt out—and the flake flashes not before it expires. His "three-score years and ten" are numbered. Human life "is finished."

EARTH'S WEARY ONES.—By Mrs. Locke.

Open the grave, the vaulted grave,
For the weary ones of earth—
They are pressing on, and their bosoms heave
For the morn of heavenly birth;
They are pressing on—in the mockery
Of joy and of hope—they long to die;
They are pressing on, in the strength of power,
And the pride of wealth—they wait the hour.

Ye may trace them in the hall of song,
By the lamp's high flaming light.
Where pipe, and tabour their notes prolong,
And jewels are sparkling bright,
In the show of beauty, mirth, and pride,
Light down the mazy dance they glide;
By the pallid cheek 'neath the smile they wear,
And the smothered sigh, ye may trace them there!

They are decked in the ruby's ruddy glow,
And wealth of the far down sea;
And the diamond shines but to mock their wo,
And proclaim the spirit free.
But alas, alas for the fond hopes crushed,
For the tones of love in the dark tomb hushed,
For affections changed and vows forgot—
Nor gems, nor pearls, can that memory blot.

Raise ye the veil at the festal hour,
From that fair unfurrowed brow;
A bride!—but wo for the bridegroom's power—
The grave ye may open now;
From the glittering robes of royalty,
Peers the broken heart thro' the sunken eye;
And the wreath of fame crowns the weary band—
Mid the honored crowd, they hopeless stand.

Ye may trace them in the house of prayer,
On the lowly bended knee—
With uplifted eye and a brow of care—
The burthened soul to free.
Then open the grave—they are pressing on,
In the beauty of youth, but a visage wan;
In festal halls—'neath the laurel's wave,
They are weary of earth—open the grave.

THE CIVIL ENGINEER AND MACHINIST.

PRACTICAL TREATISES OF CIVIL ENGINEERING, ENGINEER BUILDING, MACHINERY, MILL WORK, ENGINE WORK, IRON FOUNDING, &c. &c. Designed for the use of Engineers, Iron Masters, Manufacturers, and Operative Mechanics. By Charles John Blunt and R. Macdonald Stephenson, Civil Engineers, Architects, &c. &c. Consisting of examples worked through their entire detail of fundamental principle, organization, and process of execution; and being in every case the known great works of British and Foreign Engineering complete at length. Exemplifying the practical application of the Laws of Statics, Dynamics, Hydraulics, Hydrostatics, Pneumatics, and General Mechanics; accompanied by full reports, specifications, estimates, and journal of progress; and illustrated by the formulæ, calculations, tables, &c. in use by the first authorities. The working plans and general views of these important subjects are laid down in original drawings of great practical accuracy and careful execution, and occupying upwards of five hundred folio and imperial folio plates. In divisions, containing from ten to fourteen plates, in a portfolio. Price one guinea. Division I. is received. For sale, and subscriptions are solicited, by

WM. A. COLMAN, No. 122 Broadway,
English Publication Warehouse.

s22 3t

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phinehas Davis, patentee of the celebrated wire drilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. s 30

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street,
New-York.

☞ RAILROAD COMPANIES would do well to examin ese Cars; a specimen of which may be seen on that part o ne New-York and Harlæm Railroad, now in operation.

J 15 tf

RAILROAD CAR WHEELS AND BOXES,
AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable. They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES F. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. s28

The following Requiem, from the pen of *Grenville Mellen*, and Hymn, by Isaac McLellan, Jr. were sung at the Lafayette Celebration in Boston.

REQUIEM.

Breathe mournful music round!
In cypress wreathe your melancholy lyres,
And, as yesweep them, yield the quivering wires
To sorrow's gushing sound!

Shadow your brows, and weep!
A nation's voice peals from the booming sea,
Grief's far, faint requiem, o'er the Great and Free,
Laid in his marble sleep!

He's pass'd within the veil;
And over him, in loud and long lament,
A world's wo breaks upon the firmament,
In farewell and in wail.

We hear an empire's tread;
A land, mid shade of banner and of plume,
Pours, from one mighty heart above the tomb,
Its tribute to the dead.

One pulse is echoing there!
The far-voiced clarion and the trump are still,
And man's crush'd spirit to the changeless *will*.
Bows in rebuke and prayer!

Gather about his pall,
And let the sacred memory of years
That he made glorious, call back your tears,
Or light them as they fall!

HYMN.

His race is run, his battle's o'er,
He leads the armies forth no more,
The blooming gun, the tolling bell
Have paid to him the last farewell!

He vanished like the glorious sun
When his appointed course is run;
Yet long a brilliant track of light
Marks where he melted from the sight.

His name, as passing years shall roll,
Shall brighter shine on glory's scroll.
Old age shall love to tell his fame,
And youth with reverence speak his name.

That name, shall like a beacon star,
From the dim past, cast light afar;
And o'er the future's rolling tide,
The star of Lafayette shall guide.

The two following delightful poems, by Miss Mary Ann Browne, are natural and touching:—

MAN'S LOVE.

When woman's eye grows dull,
And her cheek paleth,
When fades the beautiful,
Then man's love faileth;
He sits not beside her chair,
Clasps not her fingers,
Twines not the damp hair,
That o'er her brow lingers.

He comes but a moment in
Though her eye lightens,
Though her cheek, pale and thin,
Feverishly brightens;
He stays but a moment near,
When that flush faileth,
Though true affection's tear
Her soft eyelid shadeth.

He goes from her chamber straight
Into life's jostle,
He meets at the very gate
Business and bustle;
He thinks not of her within.
Silently sighing,
He forgets in that noisy din
That she is dying!

And when her young heart is still,
What though he mourneth,
Soon from his sorrow chill
Wearied he turneth.
Soon o'er her buried head
Memory's light setteth,
And the true hearted dead,
Thus man forgetteth!

WOMAN'S LOVE.

When man is waxing frail,
And his voice is thin and weak,
And his lips are parched and pale,
And wan and white his cheek;
Oh, then doth woman prove
Her constancy and love!

She sitteth by his chair,
And holds his feeble hand;
She watcheth over there,
His wants to understand;
His yet unspoken will
She hasteth to fulfill.

She leads him, when the noon
Is bright, o'er dale or hill,
And all things, save the tune
Of the honey bees are still,
Into the garden bowers,
To sit 'midst herbs and flowers.

And when he goes not there,
To feast on breath and bloom,
She brings the posy rare
Into his darkened room;
And 'neath his weary head
The pillow smooth doth spread.

Until the hour when death
His lamp of life doth dim,
She never weareth,
She never leaveth him;
Still near him night and day,
She meets his eye alway.

And when his trial's o'er,
And the turf is on his breast,
Deep in her bosom's core
Lie sorrows unexprest;
Her tears, her sighs, are weak,
Her settled grief to speak.

And though there may arise
Balm for her spirit's pain,
And though her quiet eyes
May sometimes smile again;
Still, still, she must regret,
She never can forget!

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by
A12 tf D. K. MINOR & J. E CHALLIS.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street,
J31 6t corner of Maidenla e.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13 1y

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, 200 do. 1¼ do. ¾ do., 40 do. 1¼ do. ¾ do., 800 do. 2 do. ¾ do., 800 do. 2¼ do. ¾ do. soon expected. *Flat Bars* in lengths of 14 to 18 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2½, 2⅝, 2¾, 3, 3¼, 3½, and 3¾ inches diameter for RailwayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

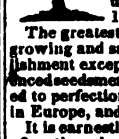
☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.
HENRY BURDEN, Agent.

Troy N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 232 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.
J23 1am H. BURDEN.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY,



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.
W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

New York Farmer and American Gardener's Magazine.

Mechanics' Magazine and Register of Inventions & Improvements.

American Railroad Journal and Advocate of Internal Improvements; and the

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

RAILROAD IRON, &c.

☞ Sealed proposals will be received until the 15th day of September next, for the immediate delivery thereafter at Suffolk, Va., of 250 tons of Railroad Iron in bars from 14 to 18 feet in length—2 inches wide by half an inch thick—pierced with countersunk holes ⅞ths of an inch in diameter, 1 foot or 13 inches apart from centre to centre; and for 16 tons of spikes 4 inches long end ⅞ths of an inch in diameter. Specimens of the latter, and drawings of the rail showing the size and shape of the hole, shape of the rail, and angle of the scarf, will accompany each bid. WALTER GWYNN, Civil Engineer.

Engineer's Office, Portsmouth & R. R. R.
Suffolk, Va., August 18. a 30 3t

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norrist. Railroad

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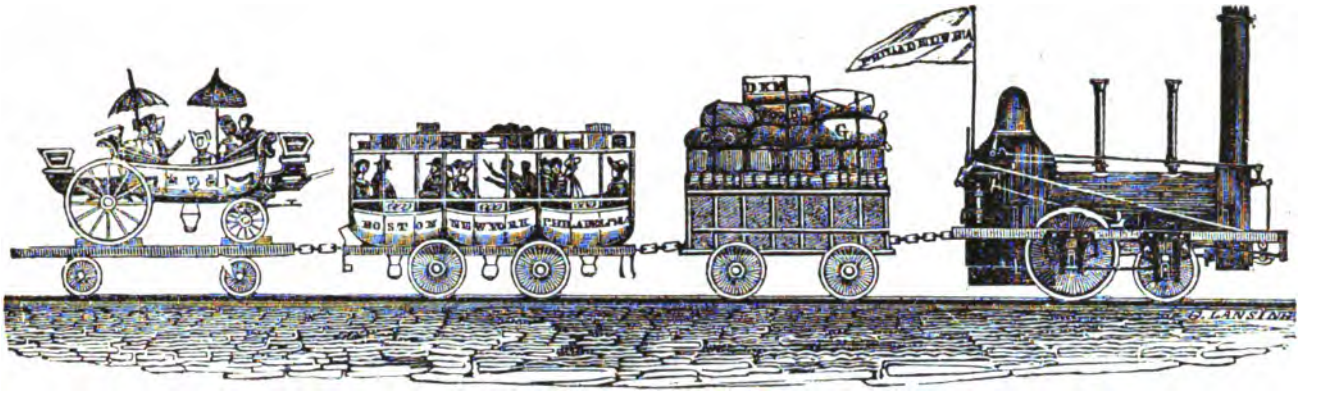

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, SEPTEMBER 20, 1834. [VOLUME III.—No. 37.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, SEPTEMBER 20, 1834.

"A Query.—What is the reason that the New-York Railroad Journal does not publish an account of the continuous railroad between New-York and Washington? We pause for a reply. A journal devoted to a particular science or art, acts strange to shut its eyes to the leading information in that art. It is like acting the tragedy of Hamlet with the character of Hamlet left out by particular desire."

The above "query" appeared in the Philadelphia Enquirer and Daily Courier, during the absence of the editor of this Journal, and therefore the amiable editor of that paper has longer "paused for a reply" than, under other circumstances, would have been necessary.

Our readers would doubtless generally have made the same "query," if such a railroad could be found, or heard of, in this country, as "the continuous railroad between New-York and Washington," and yet not referred to or spoken of in "a journal devoted to a (that) particular science or art;" and would probably have come to the same wise conclusion, that it "acts strangely to shut its eyes to the leading information in that art." But as there is no such railroad, and as we have, at different times, and frequently, referred particularly to, and published reports and estimates of, the *several parts*, which, when completed, and connected, will form a "continuous line of railroad between New-York and Washington," we trust our readers, and the editor aforesaid, will excuse us for not publishing an account of what has never been furnished us, as well as what does not exist—although it may appear "like acting the tragedy of Hamlet," minus "Hamlet,"—"*by particular desire.*"

Seriously, however, we may say, we think, without fear of contradiction, that there are few persons who can justly accuse us of omitting any thing likely to promote the cause to which the Journal is devoted, that has fallen in our way. We have not omitted the New-Jersey, nor the Philadelphia and Trenton, nor the Camden and Amboy, nor the Piladelphia and Columbia, nor the Oxford, nor the Susquehannah, nor the Baltimore and Ohio, nor the Baltimore and Washington, railroads, which, when completed, will, most of them, if we are not mistaken, form parts of the road alluded to. If we have omitted to give any very important information relative to any one, or all of these railroads, we will thank the editor of the Enquirer to point it out to us: give us book, chapter and verse,—and if we do not then publish it, a "query" may well be put. Till then, we trust he will, "by particular desire," attend as closely to his own, as he seems inclined to keep us to our, duty.

Oswego, Utica, and Albany Ship Canal.—We congratulate the friends of internal improvement in this State, upon the probability of this important work being presented in such a shape to our next Legislature, as must command for it a proper share of attention. Pursuant to a call of a committee of the citizens of Utica for a convention on the 11th of September, to consult on measures for the furtherance of the said object, a numerous and highly respectable meeting was held at Miller's Buildings on that day.

We regret that we did not receive the detailed report of the proceedings of this meeting in time for the paper of this week. They will appear, however, in our next.

We have extracted from the report the subjoined proceedings:

The meeting was organised by the appointment of the following officers—

James G. King, of New-York, Chairman.

John Townsend, of Albany; A. B. Johnstown, of Utica; G. H. M'Whorter, Oswego; Amos Tryon, Lewistown—Vice Presidents.

J. E. Bloomfield, Utica; James H. Bell, New-York—Secretaries.

Delegates from numerous towns and counties, interested in the project, were admitted, and took their seats in the convention; after which, the committee appointed for the purpose reported a memorial embracing the views of the convention, both on the "Ship Canal," and its sister project, the "Canal round Niagara Falls;" and after some debate, it was on motion Resolved, That the memorial reported by the committee be adopted, subject to the provision, that so much of the memorial as relates to the 'Canal around the Falls of Niagara' be addressed to Congress; and so much of the same as refers to the Canal between Lake Ontario and the Hudson be addressed to the State Legislature.

Resolutions expressive of the sentiments of the convention were reported by the committee for that purpose, and unanimously carried.

The meeting was addressed in support of the memorial and resolutions by Messrs. Stewart and Miller, of Utica; Burckle, of Oswego; and Bell, of New-York,

The following gentlemen, residing in Utica, were appointed as a "Central Executive Committee:"

Henry Seymour, J. E. Bloomfield, Chas. P. Kirkland, Alvan Stewart, C. E. Sherman, A. B. Johnson, A. Munson, N. Devereaux, R. B. Miller.

Corresponding Committees were also appointed for the several towns and counties, represented in the convention; and, on motion, it was Resolved, That the several towns and counties interested in the proposed improvements, which have not been furnished by this meeting with a corresponding committee, be requested to organize such a committee, and notify the names thereof to the General Executive Committee at Utica.

The meeting was then adjourned sine die.

J. E. Bloomfield,
James H. Bell,
Secretaries.

Providence Railroad.—The Citizens' Line of coaches between this city and Providence is united with the train of cars on the Providence Railroad, so that fourteen miles of the route, extending from Boston to Canton, are now travelled upon the railroad. We learn that on Saturday last the passengers from New-York, by this line, arrived in this city in three hours thirty-five minutes from the steamboat at Providenca, and in thirty and a half minutes from Canton. At the same rate of travelling, the distance from Providence to Boston will be traversed, when the railroad is completed, in an hour and a half.—[Boston Daily Advertiser.]

The Ohio and Chesapeake and Pennsylvania Canals, with a few subsequent Remarks relative to Canals and Railroads in general.

To the Editor of the Railroad Journal:

As an unfavorable impression may arise in regard to the above important improvements, by reading the remarks of "Civis," in the Journal of the 16th of August, I take the liberty of giving some facts, and my views of the canals under consideration.

The Pennsylvania canal and railroad from Philadelphia to Pittsburg, at the head of steamboat navigation on the Ohio river, is about 400 miles. The Chesapeake and Ohio Canal, from Washington city to the same place, is expected to be about 350 miles. These canals must and will form the great outlet to the western trade bordering upon the great rivers of the west. The steamboat navigation to which these canals are connected is not less in extent than twelve thousand miles, and the country exhibits a population of not less than three millions of inhabitants, residing in the States of Louisiana, Mississippi, Missouri, Tennessee, Illinois, Indiana, Kentucky, Ohio, Virginia, and Pennsylvania; and from the great increase now taking place in this population, we may safely estimate the population in 1840 to four millions of inhabitants. Three hundred pounds would be a low calculation to assume as the average available tonnage from each inhabitant annually; but at this calculation, four millions of inhabitants will give an annual tonnage to the canals and other channels of commerce of 600,000 tons. Half of this tonnage must from indubitable circumstances pass through these great canals. Already have goods passed through the Pennsylvania Canal for the different States before enumerated, and circumstances indicate that, during the year of 1835, Pennsylvania will receive one million of dollars in toll from her canals; besides, being rapidly on the increase, will, as a revenue matter, outstrip the New-York canals as much as the relative proportion of population to which these canals give vent.

Already have I made it appear that 300,000 tons would necessarily pass the Pennsylvania and Ohio and Chesapeake Canals, should they be completed by the year 1840. Suppose this tonnage be equally divided betwixt those canals: 150,000 tons will pass through each, and at an average rate of $8 per ton, for toll, will give a revenue of $1,200,000 per annum to each, and this independent of that which will be derived from the inhabitants along those lines, which together will equal one million and a half as the revenue to each canal.

I have no doubt but two or three more years of experience on the Pennsylvania Canal will fully justify my calculations; and the Chesapeake and Ohio Canal will no longer linger for the want of funds, but capitalists will anxiously seek an investment in the stock of this company. This canal is estimated to cost about ten millions of dollars, and from the foregoing calculation, will yield, clear of all expenses, about twelve per cent. on the investment.

Thus far I have said nothing as to the relative advantages of canals and railroads. I have no disposition to disparage railroads as a means of communication; on the contrary, I consider them a valuable kind of improvement, highly beneficial in their place, and next to canals as a means of communication for the surplus products of our country, but *superior* to canals where travelling or speed is the great end to be gained.

I think it highly improper on the part of "Civis," who, it appears, does not understand the situation and probable effects of some of the canals of which he makes an unwarrantable assertion, that their stock will be unprofitable,—thus to attempt to injure improvements of a highly important cast, for the mere purpose of advancing a favorite system.

Let canals first be made from the Atlantic cities to the great western waters, and then railroads will follow in their train. The State of New-York has already arrived at the time when a railroad nearly parallel with her great canal is necessary in order to insure to her the paramount advantage which nature has placed at her disposal over the lake trade.

The canal, in a comparative sense, is the draft horse, while the railroad is the horse for speed. These in conjunction form every facility for an agricultural, manufacturing, and commercial community, of which they can be possessed as a means of artificial communication. They are or ought to be co-laborers in the great cause of advancing the social intercourse, and extending more widely the blessings to be derived from a free interehange of sentiment. The advocates of canals and railroads should therefore unite their interests; it is no longer problematical as to the relative advantages of the two kinds of improvement.

Sufficient has already been done to satisfy every practical man wherein the great advantage of each improvement consists.

Yours, &c. L——.

August 26, 1834.

Internal Improvements. [From the Savannah Georgian.]

Messrs. Editors.—It is understood that our fellow-citizens of the interior of the State decidedly prefer railroads to canals, and it may be that this preference is founded in good reason. If it be intended to make the communication from Savannah to Macon only, and the nature of the country and the command of water will admit, it would require but little argument however, to show that they were in error, inasmuch as canals are so much better adapted to the carriage of lumber, wood, &c.; but if this communication to Macon be but the beginning of a line of internal improvement, which, in its ramifications, is to be to the State what the veins are to the body, and finally to connect the waters of the Tennessee with those of the Savannah, then it may well be questioned whether other parts of the State admit of canals, and whether, as railroads must then be adopted, it will not be proper to begin with that system which undoubtedly will admit of indefinite extension. To the citizens of Savannah, the choice is of no importance. It is only important to them that this beginning be made with due judgment, and that the communication be speedy, safe, and cheap.

Let, then, the question, whether of railroad or canal, rest. We, of Savannah, will assent to either; and we ask our fellow-citizens not to imbibe prepossessions or prejudices to either until a report be made. The probable course of the route will be up the Ogeechee Valley to some point near the shoals of that river, and thence across the country, through the counties of Washington, Wilkinson, and Twiggs, giving to those counties, as also to the counties of Bulloch, Scriven, Emanuel, Burke, and Jefferson, an immediate access to a seaport market, not only for their cotton, grain, and other produce, but also for their immense forests of lumber, which are now comparatively valueless. From this main stem, branches to connect it with the counties of Baldwin, Hancock, Putnam, Greene, Morgan, and the counties north, may be run at an inconsiderable expense, whilst an extension of the main stem westward will ensure to the wealthy counties of Monroe, Henry, and others, the same advantages of access to the seaboard.

The supposed length of the route from Savannah to Macon is about 200 miles, and the probable cost of the work will be $1,500,000. The interest on this sum at 8 per cent. will be $120,000 per annum, or at the rate of 5 per cent., at which money can be borrowed, will be $75,000 per annum. The article of Cotton alone, brought from Macon, at a rate of transportage very far less than is now paid, will more than pay this interest, and keep the road or canal in repair, and the freight on other articles will, in the course of a very few years, reimburse the capital expended. The freight and expenses on a bale of cotton from Macon to Savannah, by the river, is now more than 1½ cents per lb.; for the shipper has to pay freight, insurance, and interest, on the outlay during the tedious voyage, and it not unfrequently happens that damage is sustained to a very considerable extent, which is not paid by the insurer, and is a dead loss to the shipper. The consequence is, that the planter, when he brings his cotton to Macon, must be content to take 7½ cents for it, when it is actually worth on the seaboard 9 cents; or, if he gets more, then the loss falls on the merchant who buys, and who, if imprudent enough to sustain many such losses, is ruined, and, in his fall, affects the community in which he resides, and the adjacent country. But with such a route as is now contemplated, the cost of transporting cotton, including insurance and all charges, could not at most exceed ½ cent per lb., and consequently enhance the value of cotton at Macon; the difference of 1 cent the pound and if the amount of cotton sent from Macon be 100,000 bales per annum, the saving to the country, to the planter, to the citizens of Macon, would be equal to $300,000 per annum, besides paying to the road such a rate as would amply meet its expenses.

The return-freight and other articles sent down the country would be also an important item of profit to the proprietors of the route, and of saving to the country: and corn, wheat, &c., which now rot in the hands of the producer, would find a ready market, and the seaboard of Georgia, instead of being dependent on North Carolina and Baltimore for their corn, bacon, &c., would derive its supplies from its own fellow-citizens.

Every planter and every citizen is therefore doubly interested in the accomplishment of the work. He who makes 10 bags of cotton per annum will gain every year $30 in the sale of his cotton, and probably as much more in the purchase of his supplies: for, although some few of the lighter articles of dry goods may not be much lowered in price to him, yet in the articles of coffee, sugar, salt, &c., he will be a gainer exactly in the ratio of the difference of expense in transporting these articles to Macon, and his gain will consequently be 10 per cent. on his sales, and nearly as much more on his purchases.

The spirit of internal improvement is awakened, and a disposition to connect the interior with the seaboard is manifested. It is important that this disposition be so directed as that our State pride and our personal interests be consulted, and every consideration of home, affection, and general interest, must lead our citizens to prefer Savannah as the emporium of its trade, and to induce them to foster our own seaport, rather than that of a sister State. I trust that the subject will attract the attention of our citizens, and that they will not be so engrossed by political abstractions as to neglect that which is of so vital interest.

A Georgian.

Railroad to Columbia.—The Edgefield, S. C., Carolinian of the 30th ult. says, "The engineers who have surveyed the route for the proposed railroad from Columbia to Branchville, have made a report, in which they state the distance between the two places to be 61 miles. The estimated cost, including engines, cars, depositories, and an allowance for all contingencies, is put down at $553,000. The route is stated to be favorable, except one part, at which it will be necessary to have an inclined plane with stationary power."

RAILROAD INTELLIGENCE. — The following information, addressed to the President and Directors of the Georgia Railroad Company, has been placed in our hands, (says the Athens Southern Whig of the 30th ult.) and will prove interesting to the people of upper Georgia and Alabama. It is from a gentleman belonging to a committee of the Atlantic and Mississippi Railroad Company, appointed to address the people of Tennessee on the subject of the proposed railroad.

"The book of subscription will be opened on the 15th day of August, under the Atlantic and Mississippi Railroad charter, in Memphis and other places, and we are sanguine that stock will be taken liberally. Col. Long, of the engineer department, has arrived, and will, in a short time, commence his labors in making the necessary surveys, &c. A survey had been previously made as far as Bolivar, by Mr. Thompson, with estimates exhibiting the cost not exceeding $6000 per mile."

We are also informed that there is a good prospect of the Jackson, the Mississippi, and the Atlantic Railroad Companies all uniting and bending their energies to the execution of the Mississippi and Atlantic Railroad.

Columbia Railroad.—The tolls collected on the Philadelphia and Columbia Railroad, from the 3d to the 30th of August, 1834, amounted to eight thousand eight hundred and seventy-three dollars and twenty-five cents. At this rate the tolls in a year would reach one hundred and ten thousand and ninety-one dollars and fifty-five cents; equal to the interest upon two millions two hundred thousand dollars. As it is believed that the whole cost of the road will not exceed three millions of dollars, this result cannot fail to be highly gratifying to all who take an interest in the progress of our public works. It should be remembered that only one track of the road is finished, and that is used but partially, owing to the interruptions consequent upon the prosecution of the work on the second track. It should also be remembered, that the Western trade and the Susquehannah trade have not yet been brought upon the railway; from these facts it must be apparent, that that the completion of this great work, and its use for the ends for which it is designed, will amply compensate the State for the expenditure upon it, and yield a large surplus revenue.—[Harrisburg Reporter.]

[*From the Albany Argus.*]

SURVEYS AND MAPS OF THE CANALS.—The Canal Board was in session during the whole of last week, and principally occupied in revising and completing the surveys and maps of the several State Canals, which have been made by HOLMES HUTCHINSON, Esq. the engineer employed for the purpose. The map of the Erie Canal makes ten volumes, embracing about fifty sheets (22 by 14 inches) in each volume. That of the Champlain Canal makes two volumes of the same size. The Oswego Canal is in one volume, and the Cayuga and Seneca and Crooked Lake Canals are in one volume. The map of the Chemung Canal, which is not entirely finished, will make one volume. There are in the whole, fifteen volumes, embracing about *five hundred and fifty miles* of canals and feeders. There are field notes to all the surveys, which make seven volumes for all the canals.

These maps have been compiled from the most minute and careful surveys, and embrace not only the canals and feeders, but all the lands and streams connected therewith, and which have been appropriated to the use of the State. The maps have been approved and authenticated in the manner required by article 1, title 9 of chapter 9 of the first part of the Revised Statutes, and have been filed in the Comptroller's office. Transcripts of these maps are to be made, and filed in the offices of the County Clerks in those counties through which the Canal passes.

The Canal Commissioners have also had a survey made and maps compiled, of the contemplated improvements of the canal under the act of the last session of the legislature. A new stone aqueduct at Rochester, and a second set of locks from the Hudson river to Syracuse, and a feeder at nine mile creek, are the principal improvements to which the attention of the Commissioners has been directed. The law requires that the damages to individuals shall be appraised before possession is taken of their property, which will occasion some delay in the commencement of the contemplated improvements.

(From the forthcoming number of the Mechanics' Magazine, and Register of Inventions and Improvements.)

On the Application to the Arts of Sir H. Davy's Discovery, resulting from his Electro-Chemical Theory.

To the Editor of the Mechanics' Magazine:

SIR,—It was supposed by Sir Humphry Davy, that instead of affinity being a distinct species of attraction, two substances had a tendency to unite only in consequence of their being in opposite states of electricity. This view of affinity suggested to Sir H. a matter of very great importance—a mode of preventing metals from being acted on by oxygen. The metals are electro-positive, and oxygen electro-negative, and this is the reason, according to Davy, of an affinity existing between them. Now, if by any means the metals can be retained in an electro-negative condition, they cannot suffer oxidation, or, in common language, they cannot *rust*.

The importance of some mode of completely preventing oxidation must be evident to all, since the evil effects of oxygen on articles composed of metal are daily witnessed. The substance employed in rendering iron or steel electro-negative is *zinc*. A very small quantity of this metal applied to any article composed of iron or steel, will completely prevent the action of oxygen upon it, whether exposed to air or water. All articles of cutlery whatever, all iron, steel, or copper instruments used by mechanics, (excepting those which are exposed to fire,) all farming utensils—axes, hoes, sickles, scythes, plough-shares, chains, &c. &c. can be effectually prevented from "rusting" by the application of a very small quantity of zinc, soldered to them in any place where it could be the most conveniently done. The expense of the zinc for this purpose is exceedingly trifling. "A piece of zinc," says Dr. Turner, "as large as a *pea*, or the head of a small round nail, was found fully adequate to preserve 40 or 50 square inches of copper—and this wherever it was placed, whether at the top, bottom, or middle of the sheet of copper, or under whatever form it was used."—[Turner's Chemistry, p. 99. American edition.]

This brilliant discovery of Sir H. Davy's, the result of his *Electro-Chemical Theory*, was first applied to the copper sheathings of ships, which all know are very expensive, and last but a short period, in consequence of their being constantly acted on by oxygen, and the hydro-chloric acid of sea-water. The application of this discovery to the preservation of instruments composed of iron or steel was first suggested by Mr. Pepys; and delicate surgical instruments, which would be rendered useless were their cutting parts in the slightest degree oxidized, are now kept perfectly bright by the application of zinc.

One objection has been made to the application of this principle to the preservation of the copper sheathings of ships, which is, that the copper, when effectually guarded by zinc against corrosion, becomes soon covered with marine plants and animals, which the oxide and submuriate of copper, (formed on the surface of the sheathing previous to the application of the zinc,) completely prevented; and that the copper, being rendered electro-negative by the zinc, attracts substances in the opposite state contained in the sea-water, such as lime and magnesia. But neither the marine plants and animals, nor the lime and magnesia, are capable of injuring the copper; they only form a coating on its surface. When we compare the endurance of these difficulties, admitting that the above objections are well founded, with the short space of time that a copper bottom lasts, and the enormous expense of renewing the copper, they appear as nothing. Besides, it is the opinion of men of science, that by a skilful adjustment of the proportions of copper and zinc, or iron, which can be used instead of zinc on copper, these objections can be completely removed. However weighty these difficulties may be, they are confined solely to the application of zinc or iron to the copper sheathings of ships; they are not made to the application of zinc to metallic instruments.

One more advantage, and perhaps the greatest of all, arising from this discovery of Davy's, is that *iron* can be used instead of copper on the bottoms of ships, thus vastly reducing the expense of sheathing. The zinc as effectually prevents any chemical action on the iron as on the copper, and hence one is as good for the purpose of sheathing as the other.

The numerous experiments which have been made by men of science since this discovery of Sir H. Davy, have fully established its value and importance, and it now remains for men to apply it to some useful purpose.

I am aware of no use having been made of this valuable discovery except in the preservation of ships' bottoms and surgical instruments; and why, I ask, do not mechanics avail themselves of its advantages? It cannot, I think, be possible for any well informed mechanic to be ignorant of any of the facts above stated. If any one is, it must be his own fault. Books are as "cheap as dirt," and if any mechanic will say he cannot buy a few books on science, and that he has no time to study books if he had them, he is poor indeed, and leads a slave's life. Such a man I sincerely pity. But what shall I say to those who *do* understand this principle—this discovery of Davy's—who do not make some application of it? Go into the workshop of the different mechanics, and see their tools undergoing constant corrosion. Go to our wharves, and see all the iron work of ships covered with rust—their anchors and chain cables covered with oxide. Go to the printing office, and see the press red with the oxide of iron—the chases and composing sticks also covered with the same. Look at the steam engine, the most ingenious, useful, and probably the greatest of all inventions, and think whether Sir Humphry Davy's discovery could not be applied to that.

Wherein is the world benefitted by any discovery, if no application be made of it? To what purpose do we rack our brains in acquiring knowledge, if we make no use of it when obtained? People seem afraid to adopt any thing new. Any new invention or discovery, if it be ingenious, they view with delight; but the thought does not seem to occur to them whether it can be applied to any useful purpose; and if any one attempts the application of a new principle, be it what it may, there are thousands ready to laugh at him, as they did at Fulton, in his exertions to show to the world the use and

value of that machine of all machines—the *Steam Engine.*

Ships are constantly building and being coppered, without the least regard to this invaluable discovery; and why is it? Are shipbuilders and shipowners ignorant of the existence of this cheap and effectual preventive against the ravages of the elements, or have they tried it and found it ineffectual? If they have, I am not aware of it.

If any of the correspondents of the Magazine will point out any thing new on this subject, many of whom probably can, I, for one, should be highly gratified. A.

A Novelty.—The Schooner Sarah Ann, Captain Ayres, 48 hours from Philadelphia, arrived Tuesday afternoon, via the Delaware and Raritan Canal. She has a full cargo of merchandize, consigned to A. & T. F. Cornell, and other merchants in this city.

New Jersey Rail Road.—This Road, as appears by an advertisement, is now open for public use, between Newark and Jersey City. We learn that a large number of passengers are daily passing over it.

[*From the Long Island Farmer.*]

Brooklyn and Jamaica Railroad.—We have great pleasure in being at last authorized to state that the Brooklyn and Jamaica Railroad Company have decided to break ground on the 1st of November next. They have in furtherance of this object, directed their Engineer to advertise for contracts for grading and forming the bed of the road; and have also instructed their Committee to give notice of this fact to the owners of land through which the road is located and with whom arrangements for the purchase of the same have peen made. The delay which has occurred in the prosecution of this work arose from the inability of the company to reach the East River, except upon terms deemed by them inadmissible.—A proposition however was finally made to the corporation of Brooklyn, in connection with the owners of lots on Atlantic street, to open that street to the width of 100 feet, from Patchen's Dock to Parmentiers', with permission to the Company to lay their rails along the middle of the same, upon condition of their grading, paving or Macadamizing 60 feet in width of the said road. This proposition, combining as it does the interest of the railroad company, the enhanced value of lots on so wide a street, and the noble improvement of that part of the city of Brooklyn, by so spacious an avenue from the water edge to the intersection of the Jamaica and Flatbush road; offered too many substantial inducements, not to find favor with all the parties in interest. It was accordingly adopted and confirmed with great unanimity, and the immediate result is, that the work is to be commenced without delay.

Columbia and Tennessee Railroad.—In a late report of a committee of the stockholders of the Columbia and Tennessee Railroad Company, it is proposed that a general Internal Improvement Convention be held at Columbia, on the third Monday in September, inst., to take into consideration the expediency of a united effort to develope the resources of the State. The committee think it expedient to extend the road at least as far as the Cumberland Mountains eastwardly, and afford an opportunity for intersecting by branches from the various counties along the line. Raising the funds appears to present the only serious difficulty: two modes, however, for raising the requisite capital are suggested by the committee, one by inducing the State to subscribe for a part of the stock, and the other by borrowing money either on the individual responsibility of the company or through the agency and immediate responsibility of the State, the company giving a lien on individual property sufficient to secure the debt.

To promote works of public improvement it may frequently be desirable that a State should put forth a proportion of its means to aid in the advancement of such enterprise, and a State may, also, under peculiar circumstances, be of important service to such work by using its agency in procuring foreign capital to be thus expended; but experience has abundantly proved that individual companies are more efficient when untrammelled by the interference of either the general or State governments. Let them but possess the means, and the work will be done with more energy, and at a great saving of expense.

New Channel of Commerce.—Anthracite coal, from the mines of Pennsylvania, now finds its way to this city by the Owego Railroad, Cayuga Lake and the Erie Canal. It is delivered here at $12 per ton. When more perfect arrangements for its conveyance to the Railroad are completed, we are told it will probably cost us but $8. The article is becoming one of importance in our market. For blast furnaces it is unrivalled in excellence; and many are introducing it, for family use, into their dwellings. Two hundred tons will probably be marketed here the present season—much of it goes west—part of which will as heretofore, come to us via Albany.—[Buffalo Whig.]

Remarks on the Rival Claims to the Introduction of Steam Navigation. [From the London Mechanics' Magazine.]

Sir,—It must be evident to every one, that not only England, but the whole of the civilized world, is under immense obligations to the individual who first rendered steam available to the purposes of navigation. Public opinion, however, seems still to vibrate between the conflicting claims to this honor put forward by the late William Symington, Mr. Miller, of Dalswinton, (or rather by his representatives on his behalf,) and Mr. Jas. Taylor. As to those of Fulton* and Bell, they seem, according to common consent, to be wholly untenable.

We will, if you please, begin "wi' the laird" first. Mr. Miller was a man of property, possessed of an active mind, which was constantly requiring excitement. He was, therefore, always ready to enter into any experiments which promised to afford him that mental stimulus congenial to his feelings. He was, consequently, very ready to assist with his patronage young men who possessed inventive genius, or supposed that they were so blessed, and, of course, was very commonly disappointed. As he was easily induced to begin experimentalizing, he was just as apt to quit it without carrying it on to a successful result. For, although not deficient in wealth, he lacked that spirit of perseverance from which alone success can emanate.

Taylor was a tutor in this Mr. Miller's family. He had been on terms of intimacy with William Symington, when at the University of Edinburgh, and had seen a model of an improvement which Symington (though then still a very young man) had just perfected in the steam engine. In consequence, it would seem, of some mention made to Mr. Miller of Symington, (very probably by Taylor,) Mr. Miller, early in 1786, called upon Symington, who was then in the employment of, and residing with, Mr. Gilbert Meason, the manager of the Wanlock-Head Mining Company, and after conversing with him for some time, engaged him to make some experiments, for the purpose of ascertaining the practicability of propelling boats by steam. Miller himself had, previously to this, attempted to move boats by means of wheels, set in action by treddles, a plan which he was compelled to abandon from the excessive fatigue it occasioned to the men employed. This scheme, by the way, had not even the charm of novelty to recommend it, for it had been practised by the Romans, who used oxen to work machinery; and also by Savary, who had, like Mr. Miller, exerted human force for that purpose.*

The biographer of Taylor, in "Chambers' Journal," states that he "attended the University of Edinburgh for several years;" that the classes selected by him were anatomy, surgery, and chemistry; and that he "prosecuted his studies with much assiduity and success, for at the end of his course he was prepared to enter *either* upon the profession of medicine or divinity"!! Now, if the College Album be an authority to be confided in, Taylor matriculated for *one* season only, and attended the classes above mentioned for one course each. "One swallow," says the adage, "does not make a summer;" but according to Taylor's biographer, one course of lectures fully qualified him to be either a physician or a divine? I make no doubt that he was just as well qualified for the one as the other—that is, not at all. I agree with the writer in "Chambers' Journal," that his genius was excursive, and that to a very considerable extent; but I have yet to learn, that its excursions were ever attended by any beneficial result. He is said to have had a predilection for mineralogy, geology, and mechanics; but if this were true, how comes it that Taylor, being at the University where those subjects were treated upon scientifically, never availed himself of so excellent an opportunity of attending the classes in which they were taught?

The improvement of the steam engine, devised by Mr. Symington, was accomplished in 1785–1786, and it was in the spring of 1786 that Mr. Miller, as already mentioned, engaged him to carry on some experiments upon steam navigation. These were made upon the lake at Dalswinton, Mr. Miller's property, in 1788. It is asserted that Mr. Taylor remained in Edinburgh after Mr. Miller had left, to superintend castings of the parts of the engine intended to be employed in moving the boat. But if this were necessary, why did not Taylor afterwards put the engine together? If he were capable of furnishing the drawings and models by which the various parts were to be constructed, surely there could be no necessity for sending for Mr. Symington from the Lead hills, to put the different pieces properly "*in situ.*" Mr. Miller would have been little less than mad to employ Symington in these experiments, when he had such a brilliant and inventive genius as Taylor residing under his own roof. If (as has been asserted) Taylor was the author of these experiments, where are the drawings and documents to substantiate his claim? Have they ever been seen by any person? Or, indeed, have they ever existed, except in the imagination of his partisans?

There is an account of these experiments

* We shall shortly have something more to say on this subject. Fulton most certainly had some claims: to what extent we shall examine shortly.—[Ed. Am. M. M.]

* Mr. Miller seems to have had a predilection or appropriating other persons' inventions to himself; or, if *he* had not, his friends have endeavored to do so for him, as they would willingly have us to believe that the piece of sea ordnance, known as the carronade, was the fruit of Mr. Miller's genius, when, in fact, it was invented by Mr. Gascoigne, one of the proprietors and managers of the Carron Iron Works, from which circumstance it derived its name.

to be found in the "Scots Magazine" for 1788, which it has been allowed was drawn up by Taylor himself. He acknowledges, in this statement, that the merit of the expense of trying the experiment was due to Mr. Miller, but that the engine used upon the occasion was the sole invention of Mr. Symington, and throughout the whole account he never introduces his own name, either directly or by implication. The notice alluded to is subjoined.*

In 1789, Taylor is represented as being located at the Carron Iron Works, for the purpose of superintending the castings of an engine of increased size, the cylinders being 18 inches in diameter. But in opposition to this, we have the affidavit of Mr. Stainton, one of the managers of these works, who states that—

"He (Taylor) was never considered capable of superintending the work; that he never furnished a single drawing or model by which the work might be forwarded; but that, on the contrary, Mr. Symington was looked up to as being the person to whom all the necessary inquiries for the completion of the engine were to be addressed; and that, so far from considering Taylor as a principal, he was rather looked upon as a spy, appointed by Miller to watch Symington's conduct, that he did not waste too much of his time upon some experiments he was conducting at the same moment for the Wanlock-Head Company."

The experiments with the new engine succeeded entirely; but when it had arrived at that point, that by a little more exertion it might have been perfected, Mr. Miller's excitement was over. He had been bitten by an agricultural mania, dismantled the steamboat, and left steam navigation to be promoted by other hands.

In 1801 and 1802 Mr. Symington renewed his experiments under the patronage of Lord Dundas, that nobleman having purposely gone down from London to engage him. He continued them until 1803, when he completed a steam tug, which towed two merchant vessels 19½ miles upon the Forth and Clyde canal, against the wind, in the presence of many spectators. Mr. Symington took out a patent in the usual way for the protection of his invention in 1801; and this fact must dispose of the charge of his having practised any concealment or secrecy with regard to the matter.

A letter has been published, from Mr. Symington to Taylor, in which the former promises to make over half the profits of the invention to the latter. This originated, I am told, in a representation made by Taylor, that he was possessed of considerable influence amongst noblemen and members of parliament, through whose intercession a parliamentary grant might be obtained. But even supposing Mr. Symington was not entitled to the honor of being the first applier of steam to the purposes of navigation, Taylor, from his own showing, and from that of his friend, must have still less claim; for he states, that he (Taylor) called upon Mr. Miller, and endeavored to persuade *him* to secure the right to the invention by a patent. If it was Miller's invention, Taylor's regretting his own incapability of securing the right by patent is an absurdity.

Taylor's real friends cannot be much obliged to Mr. Chambers for his biography, for it certainly exhibits him in any thing but an amiable point of view. We find him, in the first place, acting as a spy upon his intimate friend Symington, and afterwards engaging in a secret correspondence with his patron Mr. Miller's most intimate friends, for the purpose of robbing him of the fruits of his experiments, by taking them away to a foreign country; and this he did after having vainly endeavored to make Miller as dishonest as *he* wished to be, in taking out a patent to secure to himself the profits of another man's genius.

If Mr. Symington had not expended his private fortune previously to 1815, and which he did in experimentalizing, there would not have been any occasion for this letter, as there would have then been ample legal proof on record of the originality of his invention. I am, sir, yours obediently,

CH.

London, May 28, 1834.

[We have great pleasure in inserting the preceding communication, because, though it contains little that is new on the subject of Mr. Symington's claims, and puts some points less forcibly than has been already done in our pages, (see particularly vol. xix. p. 121,) it is the spontaneous production of a physician who holds a high place in public opinion, and serves to show these claims are gaining ground among those enlightened and reflecting classes of the community with whom the decision of all such matters must ultimately rest. We feel persuaded that the time is now but little distant, when we shall have to congratulate the family of Mr. Symington on the complete and triumphant recognition of his title to be regarded as the first person who practically demonstrated the immense benefits to be derived from the application of steam power to navigation. —ED. LOND. M. M.]

[*From the (Boston) People's Magazine*]

TATTOOING.—How few nations there are who do not retain something of the savage custom of mutilating or disfiguring the human face, under the frivolous idea of improving its appearance, either for peace or war! How small the number of individuals, even in a Christian country, who have come fully into the belief—practically—that the "face divine" best answers the purposes of Him who forms it, when it best preserves its originality!

That the American Indians and other savage nations—children in the universal family—that they whose animality has not yet been so far removed by intellectual and moral cultivation as to change the darkened surface to a brighter hue, should paint and patch the face, or hang jewels in their lips or ears, or beads and curls in other positions, is not so much to be wondered at. Nor is it surprizing that those who are conscious of criminality in any of its more prominent forms, and yet retain a few straggling remains of conscientiousness,—for

"The man who blushes is not quite a brute,"—

should labor to hide their faces, in the hope of hiding their guilt or their shame. But why a mind and heart conscious of none but the most upright intentions, and guilty of no wrong conduct—we mean to a fellow being merely—should submit to be thus deformed and disgraced, is a question more difficult of solution.

The modes of tattooing differ among the different tribes of North America; but in all they are deemed a preparation for war. In some instances the object is to give them a more hideous appearance as enemies, and that fashion and those forms which best accomplish this leading object, would of course be most likely to find favor. But in others, it is regarded as a mark of mourning; and in others, still, it is designed for neither purpose. The women even, in some instances, have been known to tattoo themselves.

But the practice is by no means confined to the savages of America; it prevails in other countries. It appears to have existed, also, in the ancient world. Moses, in the xix chapter of Leviticus, forbids the practice among the Israelites, which indicates its prevalence among the surrounding nations. It prevailed, according to Herodotus, among the Thracians; and other authors mention it as a common thing among the Scythians, the Assyrians, and even the ancient Britons. But nowhere, perhaps, has it been carried to a higher pitch of perfection than in New Zealand.

A traveller who submitted to this singular and barbarous rite, as practised by the people of New Zealand, thus describes it. He omits to state one thing, however, which is that before the cutting is begun, they trace, with a piece of burnt stick or red earth the intended figure.

"The whole of the natives having seated themselves on the ground in a ring, we were brought into the middle, and being stripped of our clothes, and laid on our backs, we were each of us held down by five or six men, while two others commenced the operation of tattooing us. Having taken a piece of charcoal, and rubbed it upon a stone with a little water until they had produced a thickish liquid, they then dipped into it an instrument made of bone, having a sharp edge like a chisel, and sharped in the fashion of a garden hoe, and immediately applied it to the skin, striking it twice or thrice with a small piece of wood. This made it cut into the flesh as a knife would have done, and caused a good deal of blood to flow, which they kept wiping off with the side of the hand, in order to see if the impression was sufficiently clear. When it was not, they applied the bone a second time to the same place.—They employed, however, various instruments in the course of the operation; one which they sometimes used being made of a shark's tooth, and another having teeth like a saw. They had them also of different sizes, to suit the different parts of the work.

"While I was undergoing this operation, although the pain was most acute, I never either moved or uttered a sound; but my comrades moaned dreadfully. Although the operators were very quick and dexterous, I was four hours under their hands; and during the operation, the chief's eldest daughter several times wiped the blood from off my face with some dressed flax. After it was over she led me to the river, that I might wash myself, (for it had made me completely blind,) and then conducted me to a great fire. They now returned us all our clothes, with the exception of our shirts, which they kept for themselves, wearing them, as we observed, with the fronts behind.

We were now not only tattooed, but what they called *tabooed*, the meaning of which is, made sacred, or forbidden to touch any provisions of any kind with our hands. This state of things lasted for three days, during which time we were fed by the daughters of the chiefs, with the same victuals, and of the same baskets, as the chiefs themselves, and the persons who had tattooed us. In three days, the swelling which had been produced by the operation had greatly subsided, and I began to recover my sight; but it was six weeks before I was completely well. I had no medical assistance of any kind during my illness; but the Chief's two daughters were very attentive to me."

The New Zealanders appear to possess an art which comes very near the ancient Egyptian art of embalming. We have seen the embalmed head of one of their chiefs, which, except that the brains were removed, was in a state of entire preservation; and the features were less shrunk and flattened than one would have presupposed. The face was tattooed, though not in exactly the same style as that of Tupai Cupa. Several of the embalmed heads have, within a few years, been exhibited in this country.

"I heard of an animal called 'Rass' by the Kirgizzies, and 'Kooshgar' by the natives of the low countries; which is described as peculiar to Pamere. It is larger than a cow, and less than a horse; of a white color, with pendent hair under its chin, and crowned with horns of huge dimensions. These are described to be so large that no one man can lift a pair of them; and, when left on the ground, the small foxes of the country bring forth their young inside them. The flesh of the 'Rass' is much prized by the Kirgizzies, who hunt and shoot it with arrows. This animal is said to delight in the coldest climate; and would appear, from its beard, to be of the goat species, or, perhaps, the bison. A common-sized 'Rass' will require two horses to bear its flesh from the field."—[Burnes' Travels.]

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* "On October 14 a boat was put in motion by a steam engine, upon Mr. Miller of Dalswinton's piece of water at that place. That gentleman's improvements in naval affairs are well known to the public. For some time past his attention has been turned to the application of the steam engine to the purposes of navigation. He has now accomplished, and evidently shown to the world, the practicability of this by executing it upon a small scale. A vessel 25 feet long and 7 broad was on the above date driven with two wheels by a small engine. It answered Mr. Miller's expectations fully, and afforded great pleasure to the spectators. The success of this experiment is no small accession to the public. Its utility in canals, and all inland navigation, points it out to be of the greatest advantage, not only to this island, but to many other nations of the world. *The engine used is Mr. Symington's new patent engine.*"—[Scots Magazine, Nov. 1788, p. 566.]

AGRICULTURE, &c.

[*From the New York Farmer.*]

SELECTING SEED.— This is the season for the farmer and gardener to select seed for the fall and spring crops. The fairest and the best seeds should be selected; and to accomplish this, the utmost pains should be taken. For sowing and planting, seeds should be well ripened. Joseph Cooper, Esq., of New-Brunswick, New-Jersey, gives the following directions for corn.

"When the first ears are ripe enough for seed, gather a sufficient quantity for early corn or replanting; and at the time you would wish your corn to be ripe generally, gather a sufficient quantity for planting the next year, having a particular care to take it from stalks which are large at bottom, of a regular taper, not over tall, the ears set low, and containing the greatest number of good sizable ears of the best quality; let it dry speedily; and from the corn gathered as last described, plant your main crop, and if any hills should be missing, replant from that which was first gathered, which will cause the crop to ripen more regularly than is common, which is a great benefit. The above mentioned I have practised many years, and am satisfied it has increased the quantity and improved the quality of my crops beyond what any person would imagine who had not tried the experiment."

APPLICATION OF PLASTER OF PARIS. — As I find many opinions in your publication about the quantity of plaster to be used upon an acre of land, let me say how I have used it. I have applied it every month in the year, varying the application from one to ten bushels per acre. Ten was injurious — one not enough. The best mode of using it is from one to two bushels in September or October, and the same in April or May. The whole amount at either season will not do so well; yet, in either way, a young farmer might be excused if he lost sight of his land marks, and became doubtful of being upon his own old naked farm —[Farmers' Register.]

The use of gypsum in Connecticut and New-Jersey, near the salt water, is increasing. We fully believe that experience and science will make it a common manure on Long Island.

To the Editor of the Farmers' Register.

EFFECTS OF GYPSUM NEAR SALT WATER.— It has frequently been asserted and generally believed, that plaster of Paris, or gypsum, would not answer as a fertilizer of soils situated on salt water, or within the influence of saline atmosphere. From an experiment made by me this spring, with plaster on clover, I am convinced of its *powerful* effect as a manure on soil under the influence of salt water.

On the 5th of March last, I had plaster strewed on alternate lands, ten feet wide, leaving the intermediate lands unplastered. When the gypsum was applied, the clover had sprung, some of it three or four inches high. The plaster was directed to be strewed at the rate of a bushel to the acre, but from the appearance of it on the land immediately after, I thought it was less, and not sufficient in quantity to do any good, even if the soil were congenial to it. I have been, however, not only disappointed, but agreeably surprised, by the heavy growth of clover, where the plaster was applied; whereas in the lands not plastered, it was indifferent.

From the deep verdant color on the lands which had been plastered, contrasted with the unplastered part, the ground had the appearance of having been mowed every other land. These effects were only visible where the soil was well taken in clover. In some portions of the ground, it had been exhausted, or eaten out by other grasses, it having been in clover three years. On the other grasses which the soil had spontaneously thrown up, I saw no effect produced by the gypsum.

A neighbor, who saw my clover, assures me he never saw so great effect produced by plaster in the county of Frederick, where he resided for some years, and where plaster acts as powerfully as in any part of Virginia.

The land which was the subject of this experiment is distant about a mile from the Rappahannock, where the water is salt, and on the first range of hills above the river low grounds. It is a fertile clay, well adapted to wheat and corn, and capable of producing good crops of either. It has no appearance of being naturally calcareous, nor have calcareous manures been applied to it. I observed in some part of the land, where stable manure had many years ago been abundantly applied, and where the clover was very luxuriant, that the difference between the plastered and unplastered lands was slight; though in these spots there was a difference in the color of the clover. This reminded me of the theory of Sir H. Davy, that probably plaster may be supplied to some soils in sufficient quantities, in manures which contain it. I could upon no other principle account for its want of efficacy in these particular places, than by supposing the soil to have been sufficiently supplied with gypsum, chemically combined with stable manure.

May it not be very questionable as to the effect which saline atmosphere has upon gypsum? *Has it any?** It is advantageously used in some parts of England very near the sea, as for instance in Kent; whereas, it has been found of no service in some situations more remote from the cost. If salt air had the effect of neutralising plaster, would it act any where in Kent? We should say not, when we remember it has been said that the spray of the ocean has been carried, in violent storms, fifty miles from the coast.

Though Davy was not a practical agriculturist, yet his opinions in all that belongs to chemistry, directly or indirectly, deserves weight. He says, "the reason why gypsum is not generally efficacious, is *probably* because most cultivated soils contain it in sufficient quantities." He found gypsum in the soil of Norfolk, Middlesex, and Essex. Lord Dundas informed him, that having tried gypsum without any effect on his estates in Yorkshire, he had the soils examined, when it was found in both of them.

It is not my present purpose to examine into the "cui," or "quo modo" of the efficacy of plaster, but to assert the fact of its effect upon my own land on the Rappahannock.

Should the attention of our landholders in this region of country be called to the use of plaster, and if it be found to act as I am persuaded it will, it may be added to the long list of manures within the reach of almost every farmer in this section of country, such as marl, sea grass, &c. which, if judiciously and perseveringly used, would render agriculture, *with us*, one of the most certain and profitable pursuits of life. R. W. C.

Richmond county, June 17, 1834.

* Since the above was written I have accidentally turned to your "Essay on Calcareous Manures," where you say, page 143, "It is well known that gypsum has failed entirely, as a manure, on nearly all the land on which it has been tried in the tide-water district, and we may learn from various publications, that as little general success has been met with along the Atlantic coast as far north as Long Island. To account for this general failure of a manure, some one offered a reason which was received without examination, and which is still considered by many as sufficient, viz. that the influence of salt vapors destroyed the power of gypsum on and near the sea coast." Who this "*some one*" was, I should like to know; and whether he came to his conclusion by actual experiment or by bold conjecture.

[The opinion referred to by our correspondent, certainly was not founded on experiment, and probably had no better support than "bold conjecture." We believe that it will be found stated (and with approbation) by Mr. Livingston, in the appendix to the article *Agriculture*, in the American edition of the Edinburgh Encyclopædia: but as we have not that volume at hand, it is possible that we may be mistaken.]

AGRICULTURE IN BAVARIA—ITS IMPROVEMENT BY THE POLICY OF GOVERNMENT.

The following article deserves general consideration:

Bavarian agriculture, previously to the first French revolution, was, according to all accounts, less advanced than that of any other state in Germany, and, indeed, remained stationary for ages. By far the greater part of the land in cultivation was the property of the religious establishments; and the capital, Munich, was, as the German name (Munchin) implies, the city of monks. When, however, the estates of the religious establishments were sold, they were chiefly divided into lots so small, that almost every individual who was head of a family became a purchaser. These purchases were made at very low prices, on long credits; and a very great number of them, perhaps the greater number, were agreed to be paid for by the occupant in a terminable annuity: that is, he paid a fixed rent for a certain number of years, after which the land became his own freehold. The laborers who had thus become proprietors, had, for the most part, previously cultivated the same lands for the religious establishments, and, therefore, the external change was at first hardly apparent. Every estate, however, abounding in timber and stone for building, and a great part of the country being on a basis of lime stone, rock, or limestone gravel, facilities were readily afforded for a laborer to enlarge his cottage, and to add to it the necessary agricultural buildings. Scarcely any outlay was required from him but labor, and, as the produce was entirely for his own benefit and for that of his family, his exertions were extraordinary. By degrees, cottage-dwellings, of a somewhat improved description, and small farm-houses and farmeries, appeared in those parts of the country where the soil was richest; not, however, detached, as in Britain, but chiefly congregated together in small villages. The system of culture did not, at first, improve as a system; but the common operations of the established practice being more carefully performed, better crops were produced. Ultimately, however, the system became improved, in consequence of the operation of the national education that was established when the monasteries were put down, and by the teaching of agriculture and gardening, both by books and examples, in these schools. One of the first consequences was an improved rotation of crops. Almost the whole of the details of agricultural improvement in Bavaria have originated with M. Hazzi, an agricultural writer, and editor of an agricultural journal in Munich. The activity and patriotic benevolence of this gentleman are beyond all praise. It was chiefly through his exertions that a piece of ground was added to every parochial school in Bavaria, to be cultivated by the scholars in their leisure hours, under the direction of the master. In these schools, Hazzi's Catechism of Gardening, of Agriculture, of Domestic Economy and Cookery, of Forest Culture, of Orchard Culture, and others, all small 12mo volumes, with wood cuts, sold at about 4d. each, are taught to all the boys, and those of gardening, the management of silk worms, and domestic economy, to the girls. Since these schools have come into action, an entirely new generation of cultivators has arisen, and the consequence is, that agriculture in Bavaria, and especially what may be called cottage agriculture and economy, is, as far as we are able to judge, carried to a higher degree of perfection than it is any where else in the central states of Germany; at all events, we can affirm that we never saw finer crops of drilled Swedish and common turnips, or finer surfaces of young clovers, than we observed along the roadsides in October and November, 1828. The fences, also, were gene-

rally in perfect order, and a degree of neatness appeared about the cottages which is far from common either in France or Germany. These remarks are not the result of observations made, as is frequently the case, from the cabriolet of a public diligence, but from deliberate inspection, and from entering many of the cottages and schools. To enable us to do this, we travelled, every where in Germany, in a private carriage, and never in the dark. We had also, as we have before stated, the advantage, while in Munich, of constant intercourse with M. Hazzi, M. Sckell, and other members of the agricultural society; with the chief engineer, Baader, who had been many years in Scotland; with Baron Eichthal, the proprietor of a large estate, on which he has introduced the Scotch husbandry, and with whom we were acquainted in London; and with his very intelligent tenant, an East Lothian farmer. The result of the whole of the information procured and of the observations made, is, that we think that the inhabitants of Bavaria promise soon to be, if they are not already, among the happiest people in Germany. The climate of the country will prevent its agriculture and gardening from advancing beyond a certain point, but to that point both will very soon be carried.

So desirous is the government of improving not only the agriculture, but even the face of the country, that they have a standing commission, consisting of counsellors, engineers, architects, and the landscape gardener Sckell, solely for the purpose of devising improvements in the direction of public roads, canals, bridges, public buildings, and gardens, national forests, but, above all, for lining the public roads with trees. These trees are, in some places, in the suburbs of towns, chiefly ornamental; in others they are fruit trees, or mulberry trees cultivated for the silk worm, (a catechism on the management of which is also published by M. Hazzi;) and, where nothing more profitable or ornamental will grow, forest trees. An extraordinary degree of attention is paid to the mile-stones, and to the guide-posts, neither of which are wanting on any road. The guide-posts are generally painted black with the letters in white or red, the black contrasting better with the snow, which, in some parts of the country, covers the ground for six months in every year. Some of the mile-stones have a bench of stone, forming a plinth or base around them, as a seat; others, where stone is not so plentiful, have a semi-circular area of turf around them, bounded by a bench of the same material, as a seat, and planted behind with poplars or other trees. The neatness with which these turf benches, and the ditches or other fences, and also the grass margins by the sides of the roads, are kept, far surpasses any thing of the kind which we have ever seen in Britain. With us, if any thing of this kind is met with in the public roads, it is chiefly the result of accident, either in the situation or circumstances of the road; or arises from the appointment of a road surveyor, who happens to have at once some taste, and more than ordinary facilities for displaying it. In Bavaria the whole is the result of design and system, the entire management of the roads being in the hands of the government. The same ought certainly to be the case in this country; for, otherwise, it is utterly impossible to adopt one general system of improvement.—[Weekly Dispatch.]

Hogs—Mackay breed.—In commencing the business of a stock-breeding establishment, it was determined to spare neither pains nor expense, within the bounds of reason and sound discretion, to make the establishment as complete as could be done with the limited means at our command. It is a decided aphorism in the breeding department, that different kinds of stock, and animals of the same kind, but possessing different qualities, forming varieties, are best adapted to different locations, and different views of farmers.

It therefore becomes necessary, in order to answer all the purposes intended by such an establishment as we are desirous of rearing up, to possess all the best and most approved varieties of the several breeds, with which the superior art of breeding has lately enriched Europe and our own country.

In the prosecution of this desirable end, we have added to our stock of improved breeds of hogs another superb variety, called the *Mackay breed.* The history of these fine animals is given us by the gentleman from whom they were purchased. He says, "I purchased the hogs of Capt. John Mackay, of Boston—they are what is called the *Mackay breed.* The competition for the premium on swine, at the Brighton and Concord shows, has been of late years chiefly between this breed and the Bedfords. Capt. Mackay himself has taken on his breed over $200 at the shows in the last six years.

"When Capt. M. followed the sea, he made it a rule to purchase pigs, when he saw those of peculiar good quality, in whatever part of the world they might be, and brought them home to his farm in Weston, near Boston. After he left the sea, he became engaged in rural pursuits, and resolved to see what he could do by crossing his various races of swine, which he had collected on his farm. By perseverance, directed *by good judgment,* he at length obtained what he calls a *distinct breed,* to which the public have affixed his name; and which, for aptitude *to fatten at any age,* large size, &c. are perhaps unrivalled. Capt. Mackay has now quit breeding swine, having sold out his stock.

"The specific characteristics of this breed are, head short and small; chest very broad; back tolerably broad, rather falling below, than rising above a straight line; gammons large; legs very short and tolerably small; constitutions not so hardy as the Bedford, but dispositions more easy and peaceable."

Manufacturing Cider.—The scarcity of apples makes it unnecessary for us to say much on the subject the present season; still it is very important to have cider of the very best quality. The following, from the Transactions of the Essex County Agricultural Society, of Massachusetts, contains the important directions.

The cider exhibited by Mr. Kimball was of a high order of excellence. It was clear, sprightly, of good color, and of excellent flavor. Mr. Kimball furnished the committee with a particular statement of the manner of making and preserving the cider. By this statement it appears the cider was made about the 20th November, 1832, with eight or nine other barrels, all of which were much alike, and that it is the pure juice of the apple, without any other mixture or ingredient whatever. The fruit was well assorted, and consisted principally of the green sweeting, the baldwin and the pippin apples, and was ground the night before pressing. Particular care was taken in straining the cider, that the straw should be clean and closely packed. The cider remained out of the cellar three or four days after it was made, the weather not being very cold. It was put into new strong casks, and but little air admitted during the winter. It was drawn off the first of April, and put into the same casks after they had been cleansed with water, and a brimstone match. All the cider was sold, with the exception of two barrels, in June and July. The barrel presented for premium was wrapped in woollen blankets by the middle of June. About the middle of August Mr. Kimball sold the barrel of cider not wrapped in blankets, and at this time there was no perceptible difference between the two barrels, except that the one wrapped in blankets was colder than the other. The cellar of Mr. Kimball is of a dry sandy nature, and by the first of July generally gets warm, but he is not sure that cider changes any sooner in such a cellar. Mr. Kimball remarks, that although there may be a difference in cellars in regard to keeping cider, yet his own experience has taught him that the grand essentials in making good cider are good fruit well assorted and in a proper state of ripeness, with clean sweet casks, and proper attention to the admission of air.

Marl in Maryland.—Under the head of "Good News for the Lower Counties," the Editor of the Baltimore Farmer says,

Dr. Ducatel visited our office a few days ago, on his return from his geological survey of the Eastern Shore and Lower Counties of Maryland. He informs us that he has discovered marl in great abundance on the banks of rivers in Calvert and Charles counties, and on the Eastern Shore. If this discovery is turned to its proper use by the farmers, who have it in their neighborhood, it will be of much more value to the country than the gold mines of Georgia and other states, where that mineral has been found, will ever be. If this marl should turn out to be as beneficial to the soil as that with which we have been acquainted for the last fifteen years in the state of New-Jersey, it will, if properly applied, quadruple the value of their land in five years.

There is great variety in the quality of marl; some abounds with undecomposed shell, so as to require burning, and will be little different in its effects from the hydrate of lime; marl of other kinds is composed of disintegrated shells, which have been decomposed by some acid supplied by the earth, and where this acid is the sulphurous, the marl is essentially the same as plaster of paris.

We have known an experiment with the Jersey marl on potatoes—A piece of ground was selected for the purpose; one portion was planted without manure, another with the usual quantity of stable manure, and a third with marl—It is many years ago, and the quantity yielded is not now recollected, but the size of the potatoes in the different experiments is quite fresh in our recollection. Those without manure were little larger than hickory nuts; those with the manure were tolerably fair potatoes, about the usual size; those produced by the marl were very large, and one being weighed reached the weight of 1 lb. 4 oz.

The best way decidedly of using this marl is as a top-dressing on clover, and then turning in the sward while the grass roots are still full of sap.

We have known land that would produce nothing but the poorest pasture, after a dressing with ten cart loads of marl to the acre, produce the following season one and an half tons of hay.

Dr. Ducatel has promised us specimens of the different kinds of marl he has discovered, and we have taken measures to obtain some specimens of the Jersey marl beds, that we may by comparison determine their similarity.

Cattle.—Stalled oxen, as they grow fat, being naturally very hot, can scarcely be kept too cool, provided they are dry. Lean cattle can scarcely be kept too warm.—[Lisle.]

Soap Making.—This is a process in which many of our good house-wives experience much trouble and vexation. This arises from their not being sufficiently acquainted with the simple and compound substances which they employ.

When a solution of potash or ley is deprived of carbonic acid, or rendered caustic, it readily combines with animal fat, and forms the compound called soft soap. When both the ingredients are in proper condition, there is no difficulty in making soap.

As soap for the use of farmers' families is more commonly prepared by leaching the ashes, which have been made during winter, we will give such short directions as will enable all house-keepers to make a good article with little trouble.

A barrel with one head is most commonly made use of as a leach; into this, when placed at a suitable height on a board, should be put one peck of fresh burnt slacked lime, and the barrel filled with ashes. Water should be put upon the top, and allowed to filter through until the most of the potash contained in them has been separated. The object in putting the lime at the bottom of the cask, is, that the ley may pass through it, and deprive it of any carbonic acid it may contain, and which would prevent it from combining with the grease and forming soap. When potash is saturated with carbonic acid, it forms pearl-ash or sal æratus, which will not combine with grease; but as lime has a stronger affinity for the carbonic acid than the potash has, it will retain it when leached through it, and allow the potash or ley to run off in its caustic state.

Another cause of failures in soap making is the quantity of salt that is often mixed with the grease; this should be carefully separated by boiling it in a kettle with a quantity of water, by which means the salt will unite with the water, and leave the grease in a proper condition for mixing with the ley. When there is care to free the ley from acid, and the grease from salt, fine soap may be made at the rate of a barrel to every fifteen or twenty pounds of grease.

The strength of the ley, to combine readily, should be such as to float a new-laid hen's egg; and all that runs after it is of that strength, should either be reserved and put upon the next leach full of ashes, or boiled down until it acquires the specific gravity required.

In order to have soap as mild as possible, there should be as much grease added as the ley will dissolve, in which case the soap will be smooth and salve like, and sooner be convenient for washing than when it is hard or liver like, which last is made by adding about an equal quantity of water to well made soap, and is what the soap-makers call sophisticating it.

Those who would make hard or bar soap for family use, can do it by appropriating a suitable portion of clean made soft soap, into which, while boiling, they should add by degrees common salt, until it undergoes a change or curdles; after which they should allow it to cool, when the hard soap will be upon the top; this may be taken off, and the bottom cleaned from those impurities which will be found adhering to it; cut it into bars for drying, or it may be put into the kettle again with a very little water, and again heated and allowed to cool as before, when it will have become more uniform.

The Weather.—From the valuable table kept by Mr. McAllister, Optician, we have ascertained the following facts in relation to the heat in this city for the last ten years, during the months of June, July, and August. It may hereafter serve as a good table of reference.

The same thermometer, placed in the same situation, and in the shade, has been used during the whole period of time.

The day selected in each month has been that on which the thermometer stood highest at noon, at which hour the record was made.

1824	June 7th	97
	July 2d	95½
	August 9th	90
1825	June 21st	100
	July 22d	100
	August 15th	94½
1826	June 3d	94½
	July 13th	95½
	August 2d	90½
1827	June 20th	90
	July 3d	96½
	August 6th	99
1828	June 28th	96½
	July 24 & 25 each	95½
	August 1st	96
1829	June 20th	92½
	July 23d	96½
	August 14th	92½
1830	June 16th	93
	July 27th	97
	August 16th	94
1831	June 3d	96
	July 23d	96½
	August 17th	93½
1832	June 25 & 26 each	91½
	July 7th	93
	August 7th	93½
1833	June 15th	90
	July 22d	94
	August 14th	89
1834	June 7th	91½
	June 10th	96
	July 8th	98
	July 9th	98½
	July 16th	98
	July 24th	99
	July 26th	97½
	August 5th	95⅓

Average Heat of each month for ten years.

	June.	July.	August.
1824	81.3	86.2	79.8
1825	84.6	88.7	81.7
1826	82.5	85.4	82.7
1827	80.2	86.3	84.5
1828	87.0	87.1	85.8
1829	80.1	84.1	83.3
1830	80.3	87.9	83.0
1831	85.6	86.9	85.4
1832	80.3	84.9	82.7
1833	77.0	83.7	81.1
1834	81.4	89.5	

On Thursday, the 8th of July, between one and two o'clock, the thermometer rose to 100¼. On Tuesday, August 5, at half-past one o'clock, it stood 100½ degrees, being the warmest day this season.—[Phil. Herald.]

New Improvement in Washing Machines.—One would suppose that Yankee ingenuity had become well nigh exhausted upon washing machines: but we have lately examined a new invention, or rather a modification of an old system, by Mr. James Pullen, of China. His plan is upon the common fluted washboard, but his flutings are made of sheets of copper, zinc, tin—or they may be made of glass, earthen, or similar durable and smooth substances. These sheets or substances are fastened to boards, and used as such boards are commonly used. Now where's the improvement?—1st, In durability. 2d, In its smoothness. And 3d, Ease in performing the operation of rubbing. A common washboard does not last long—it soon gets rough, of course wears out the clothes and makes harder work; they get warped and split, are then patched up with shingle nails, which get rusty, and make a rickety, weak concern; the women scold, and the poor husband has to march off and buy a new one. The metallic rubber will last a long life time, if a little care be taken in drying it after using; for when worn a little on one side it may be turned and worn on the opposite side, and in the contrary direction.

We like the simplicity of the concern. Our washing machines have been too complicated. The inventors seem to have considered it necessary to show their skill in combining the greatest number of mechanical modifications in one piece; and the greater the array of cog-wheels, cranks and rollers, the more ingenious has the machine been considered, and the more likely to do its duty without hands. Disappointment has of course followed. This improvement is simple, and promises no more than it can perform. It does not promise to indulge idleness, and to do away the labor of washing; but to lighten and facilitate that labor, and render it a pleasure, rather than a dreaded task. Mr. Pullen has left one of them at our office for the inspection of those who wish to examine it.—[Maine Farmer.]

Norcross' Diving Apparatus.—Mr. L. Norcross, of Dixfield, gave us, last week, an interesting exhibition of his apparatus, which enables one to go under water and remain as long as he pleases, in search of any articles at the bottom; and then come up neither wet nor drowned. This is effected by means of a dress of cloth saturated with India rubber, which is put over the body, covering all parts. A large helmet of lead is put over the head, which rests upon the shoulders, and is made tight with the dress. Glass is put in front of the helmet to see through, and two tubes affixed to the top, through which the air circulates. These tubes are of India rubber cloth or hose, and must of course be long enough to reach from the bottom above the water. To one of them is attached a forcing pump through which air is propelled by some one at the surface; the other lets the air escape, so that there is a constant circulation of fresh air. Mr. Norcross has adopted a peculiarly simple mode of obviating the great pressure of the water in preventing this circulation. A small portion of tube for the escape or return of the air is made of leather, and the pressure of the water of course flattens or shuts it together, and thus keeps the air in until the forcing pump throws in sufficient to overcome this pressure, when it passes out. This part then acts as a valve. The person therefore is enclosed in an atmosphere, and can breathe, though covered over by the "vasty deep," nearly as well as in the atmosphere. We are aware that many plans have been devised for descending into the water for the purpose of carrying on operations below the surface, but we think this plan an improvement.

Mr. Norcross also invented the process of preparing the India rubber which he puts on: this may or may not be the same preparation which has heretofore been used; but as those who have used it keep it a secret, credit is not the less due to him for discovering the mode used. As he has spent much time and money in bringing his invention into practical use, and been subject to much trouble for want of suitable assistance, we hope that he will ultimately be well rewarded for his ingenuity.—[Maine Farmer.]

Launch.—At Centreville, Barnstable, 9th instant, a fine schooner of 88 tons was launched, called the "Banner," intended for the Albany and Boston trade, commanded by Capt. Edward Lewis, Jr. She was built by Mr. Jona. Kelly, and is the fourteenth vessel launched from his yard within a few years.

THE INDIAN WAR.

To the Editors of the National Intelligencer.

As every thing from the Dragoons and the Far West is peculiarly interesting at this moment, I have taken the liberty to send some remarks, based on a letter I received yesterday from a gentleman at Fort Smith, Arkansas, in whose statements every reliance may be placed. The letter is dated the 8th ultimo, and states that a gentleman had reached Fort Smith, from Towson, the day before he wrote, who had been employed as a citizen-physician to accompany the Dragoons, and that he had been compelled to return on account of ill health.

Gen. Leavenworth was following on to overtake Col. Dodge, when he was taken sick, and died in the "Cross Timbers." He was brought back, and buried at Capt. Bean's Camp, on Red River, about five miles above the Fause Washita.

Sickness had spread, and was spreading to an alarming degree, amongst the Dragoons—more than fifty had been taken sick of a day, and also many of the officers. The disease is the bilious remittent fever of the country.

Col. Dodge had left all his sick at Capt. Bean's camp, and pushed on with about one half of his command; and had not been heard from since the day after he marched.

The letter further states, that the Pawnees are most constantly in the vicinity of Bean's camp. One night the horses became frightened, and 150 were lost, there not being men sufficient to pursue them; in fact barely enough to nurse the sick.

I feel very anxious for the company. I have had some little experience in the hardships of the wilderness of that country; but with all our hardships and sufferings we enjoyed fine health.

We may calculate very fairly, that the same cause inducing sickness in those first attacked will still continue, and extend to those under Colonel Dodge's command; and every step he advances West will only increase his difficulties. It is impossible to keep their horses *staked* up, as the only dependence for a scanty support is found in the prairies; and frequently grass is very scarce where Buffaloes are, or have recently been. I have seen extensive prairies looking like eaten out pasture grounds.

The Pawnees will not dare to attack, even fifty well appointed men in fair conflict. They play a surer game than that. The finest horsemen in the world, and mounted on their hardy steeds, the genuine descendants of the famous Andalusian raco, they hover on their flanks; drive the game from your front; cut off any stragglers in your rear; and by some of their numerous, and adroit manœuvres, alarm your horses at night, and scatter them over the prairies; as was the case of Capt. Bean's camp.

The "Cross Timbers" above alluded to, is a belt of timber, of irregular width, varying between ten and twenty miles; streching North and South, between the Arkansas and Red River. Fort Townson is nearly South of Fort Gibson; and taking a Westerly course from that line, about one hundred miles will carry you to the Cross Timbers. From my exgrowth of Cotton-wood, lining the margin of the streams.

At Fort Gibson there is also much sickness. Dr. perience, the name is rather fanciful. In pursuing the West course as above, the country is variegated with a succession of timber land and prairie—the former gradually lessening in quantity, and diminishing in size, until it dwindles to the stunted oak bush not more than one or two feet high but generally loaded with mast in the season. However, as you approach the great Western Prairie, the timber increases a little in size; and in many places it becomes so thick and impervious, at to render it very difficult to get through on horseback. After that, the great Western prairie stretches to the Rocky Mountains; and no timber is to be seen except a thin Welsh, who was ordered up from Fort Coffee to see Dr. Wright, who was very ill, was attacked himself, and fell a victim to the diseases of that country.—His loss is greatly regretted, as he was admired as a Physician, and beloved as a man. There is but one Surgeon at Fort Gibson to discharge the laborious duties of that post.

The troops at Fort Coffee are remarkably healthy. H.

Sept. 9th, 1834.

[*From the National Intelligencer.*]

IN MEMORY OF GEN. LEAVENWORTH.—At a Meeting of the Officers of the 3d Infantry, stationed at Fort Jesup, La., on the 11th day of August, 1834, Major William G. Belknap was called to the Chair, and Lieutenant and Adjutant G. Wright appointed Secretary.

The Chairman having stated the object of the meeting, to be for the purpose of expressing publicly a mark of respect for the memory of the late Colonel and Brevet Brigadier General Henry Leavenworth, of the 3d Regiment of United States Infantry, who died on the 21st of July, 1834, at the "Cross Timbers," 120 miles West of Fort Towson, while commanding the Southwestern Frontier, and conducting an expedition against the Pawnee Indians,

On motion, it was Resolved, That Captain A. Lewis, Captain T. J. Harrison, Captain Benjamin Walker, Lieut. W. R. Montgomery, and Lieut. E B. Babbitt, constitute the Committee to prepare resolutions expressive of the feelings of the meeting, on this melancholy occasion.

The Committee then presented the following resolutions:

Resolved, That we deeply deplore the death of our much lamented and highly respected Commander, Brevet Brigadier General Henry Leavenworth, whose brave and gallant conduct on the field of battle won for him the notice and high approbation of his Government; and that, by his death, the service of our country has lost a gallant and accomplished officer, his Regiment an efficient and able Commander; his family its protector, a tender husband, a kind and affectionate father; and his officers, a most sincere and esteemed friend.

Resolved, That the Commanding officer Brevet Major Belknap, be requested to address to the afflicted family of the deceased, a communication, expressive of the high esteem entertained by the officers at this post for the character of their late Colonel, and that they sympathize most sincerely with his family on this distressing affliction.

Resolved, That the officers of the Regiment, entertaining a grateful sense of the kindness and friendship manifested for them by their late Commander, and feeling themselves the liveliest interest in whatever shall concern the future happiness, welfare, and prosperity of his orphan daughter and widow, would most affectionately tender them their friendship and protection.

Resolved, That the officers of the Regiment now stationed at Fort Towson be requested to co-operate with us in removing the remains of the deceased to Delhi, in the State of New York, for interment, and that a Monument, with suitable inscription, be there erected to his memory.

Resolved, That the officers at this post, in testimony of their profound respect and esteem, for the character of the deceased, and regret for his loss, will wear the usual badge of mourning on the left arm, and hilts of the sword, for sixty days.

Resolved, That a copy of the above proceedings and resolutions accompany the letter of the Commanding Officer to the family of the deceased, and that a copy of them be likewise furnished for publication to the Editors of the Military and Naval Magazine, National Intelligencer, New York Courier and Enquirer, Little Rock Gazette, and Missouri Republican, after having been signed by all the officers of the 3d Infantry at this post.

W. G. Belknap, Major and Chairman,
A. Lewis, Captain, 3d Infantry,
T. J. Harrison, Captain, 3d Infantry,
B. Walker, Captain, 3d Infantry,
C. Wheeler, 1st Lieut. 3d Infantry,
J. W. Cotton, 1st Lieut. 3d Infantry,
E. B Birdsall, 1st Lieut, 3d Infantry,
J. Bonnell, 1st Lieut. 3d Infantry,
W. R. Montgomery, 1st Lieut. 3d Infantry,
E. B. Babbitt, 1st Lieut. 3d Infantry,
N. C. Macrae, 2d Lieut 3d Infantry,
T. Cutts, 2d Lieut. 3d Infantry,
A. G. Blanchard, 2d Lieut. 3d Infantry
H. Swartwout, 2d Lieut. 3d Infantry.

G. WRIGHT, Adjutant 3d Infantry and Secretary.

[*From the National Gazette.*]

A GREAT QUEEN, OR KING BUG-A-BUG.—Through the kindness of Dr. M'Murtrie, we have had an opportunity of examining one of the most singular animals that ever issued from the plastic hand of Nature, a queen of *Termes*, or *White Ant*, which, with other rarities, such as the skeleton of the great African Ourang, the *Chimpansé*, an entirely new *genus* of the Naiades, (a description and plate of which, we understand, will be found in the next number of the Journal of the Academy of Natural Sciences, now in press,) a Snail with its egg, both of most gigantic dimensions for a snail, &c. have lately been sent to that gentleman from South Africa. According to the Doctor, although Termites are found in Europe, Africa, Asia, and America, it is only in the tropical portions of the old world that they are to be found in their "glory." There, their ravages are truly frightful. The communities they form are literally innumerable, and they consist of several sorts of individuals. The *laborers*, or the larvæ, which are soft and white, do all the work and all the damage, and the *soldiers*, about half an inch long and of a brown color, do nothing but fight or attend to the defence of the colony, and mount guard over all the laborers. Having passed through the usual metamorphosis of an Ant, the Termities, male and female, take wing together, but soon come to the ground, where the females are seized by the laborers, forcibly conducted to their habitation, and there immured in a cell which is then built up as not to allow the possibility of egress. There the attendants of this now royal personage carefully supply all her wants, and gradually enlarge the dimensions of her (clay) cell, to accommodate it to the increasing size of her abdomen. *Three hundred thousand eggs* are deposited by each of these queens in a few days, being removed as they are produced by numerous attendants (the larvæ) to the adjoining nurseries or cells, where they are piled up and carefully attended to till hatched. The enormous developement of the abdomen in this insect may be imagined from the following dimensions of the individual now in the possession of Dr. M'Murtrie. Length of head and thorax, four eighths of an inch; breadth of ditto one eighth; abdomen, *four inches and a half long, one inch thick, and upwards of one inch broad.* The specimen by being preserved in diluted alcohol has retained all its freshness, and is perfect even to the antennæ.—A memorandum accompanying this great Queen states that the Africans style her the "*King Bug-a Bug.*" The dwellings of these Termites are of clay, somewhat conical, are elevated from ten to thirteen feet above ground, and at a little distance resemble a village of Hottentots.

Short Sermon.—The following pithy sermon, from a *pithy text*, has been published in England, and has met with a very extensive circulation in that country.

"*Be sober, grave, temperate*"—Titus ii. 2.

1, There are three companions with whom you should always keep on good terms:

1st. Your Wife.
2d. Your Stomach.
3d. Your Conscience.

II. If you wish to enjoy peace, long life, and happiness, preserve them by Temperance: Intemperance produces,

1st. Domestic Misery.
2d. Premature Death.
3d. Infidelity.

To make these three points clear, I refer you,

1st. To the Newgate Callendar, the Old Bailey Chronicle, and the Police Reports.

2d. To the hospitals, lunatic asylums, and workhouses, and

3d. To the past experience of what you have seen, read, and suffered, in mind, body, and estate.

READER DECIDE!

Which will you choose—Temperance, with happiness and long life, or Intemperance, with misery and premature death?

When the Earl of Ripon's seat of Knockton Hall, in England, was lately destroyed by fire, a chest marked "To be saved first in case of fire," was rescued, although the furniture, pictures and library were destroyed.

Some imagined it contained title deeds, others gold and silver, but upon its being opened, it was found to contain the play things of a deceased favorite and only child. This is a trait that honors human nature, and we cannot conceive a sweeter tribute than this, to the memory of a beloved child.—[Albany Daily Adv.]

Napoleon said to his uncle, Cardinal Fesch, "Go and select the place which you are to occupy hereafter in the Pantheon." "No," replied the cardinal, "you would not have me placed in the anticha mber of hell."—[Simeon's Letters.]

STEAM CARRIAGES.—It is said that the experiment made by the Dutch to test the usefulness of steam carriages on common roads, has been completely successful. The roads of Holland are well calculated for this purpose. They are level, and during the reign of Louis Bonaparte they were greatly improved, the principal highways having been paved with hard burnt tiles placed edgeways, thus making perhaps the best highway in the universe.

NEW-YORK AMERICAN.

SEPTEMBER 13—19, 1834.

LITERARY NOTICES.

Works of Mrs. Sherwood. Vol. IV. Uniform Edition. New York: Harper & Brothers.—This volume embodies various tales heretofore published; among them the *Indian Pilgrim*, originally designed by the author for circulation among the Hindoos themselves, when she was resident in Calcutta; the *Broken Hyacinth*; the *Little Woodman*, &c. &c. The mechanical execution of the work is perfectly sustained.

The Principles of English Grammar, &c. &c. By the Rev. Peter Bullions, Professor of Languages in the Albany Academy. Albany: O. Steele.—The plan of Murray's Grammar is followed in this new one; the aim of the author being, by judicious retrenching and condensing, and by bringing the whole up to the state of present improvements, to put in the hands of youth a less prolix and bulky grammar than that on which it is modelled. Another aim of the compiler is so to arrange the rules and principles of general grammar, as that they may apply to, or be in perfect harmony with, the grammars of the dead languages. He is preparing a suite of grammars, Greek, Latin and English, all, as far as general principles are concerned, upon the same plan and arrangement; and this will undoubtedly simplify the study of all three.

Upon such cursory examination as we have found time to give this work, it seems to us well done.

Repertorio General de Conocimientos Utiles, Tom. 1, No. 1. Nueva York. *Juan de la Granja.*—In this polyglot city, it is only wonderful that a Spanish periodical has not before been established. We hail this one, however, even now—and think well of the selections, and composition of its articles—in the hope always, that it will find readers in the islands, and former dominions of Spain on the continent. In this sense, the dialogue between two Republicans, which treats of questions, that, as Sir *James Mackintosh* said to *Augusta de Stael*, "are here taken for granted," may be deemed apposite and instructive among peoples, who, as yet, have no practice of liberty. On the other hand, the statistical notes, and information respecting the United Mexican States, is of interest to us here.

If the number now issued shall succeed in attracting a sufficient support, this periodical will be continued, and appear semi-monthly. We hope it will succeed.

Lafayette, a poem, by Thos. Power. Boston, *Russell & Odiorne.*—Either the variety, the brilliancy and the mutations in Lafayette's career, so far exceed the ordinary range of imagination as to leave no scope for poetry—or the Poet who is to sing them has not yet risen—for sooth to say, we have, as yet, read little poetry worthy of the theme, and we cannot make an exception in favor of Mr. Power's inspiration.

The Juvenile Miscellany, Vol, 1, No. 1. Boston.—This is a resumption of a little monthly publication for children, originally undertaken by *Mrs. Childs*, and abandoned for want of sufficient encouragement. It recommences with spirit, and is to furnish little stories in French as well as English, with occasional poetry. We copy a neat little piece:

THE SUMMER SHOWER.

Here comes the summer shower!
The earth is dry;
And withered seems each little flower,
And dim its eye.
But see! the threatening cloud
Comes slowly on,
Along the sky the heavy vapors crowd—
The light is gone!
Hark to the rising breeze!
Its whispering sound
Louder and louder rushes through the trees
And o'er the ground!
See how the lightning flings
Its wreaths of fire—
How far the storm clouds, like an eagle's wings,
To Heaven aspire!
Now the deep thunder rolls;
And sweeps the blast!
Hush'd be our voices—silent as our souls—
Till all be past.
How pours the rapid rain!
A grateful sight—
Earth, and her darling flowers look up again
With new delight! P. B.

The American Library; No. 1. Edited by Samuel L. Knapp. New York: *Charles Lohman & Co.* The idea of this publication strikes us very favorably. A weekly quarto magazine of some fifteen or sixteen pages, handsomely printed, and to contain—price sixpence—authentic American history. The cheapness, the frequent period of publication, and the mass of useful and instructive knowledge which, at the end of the year, the 52 numbers will embody, and above all, the subjects—all American—should recommend this new enterprize of Mr. Knapp to general encouragement.

The American Turf Register for September. Baltimore: *J. S. Skinner.*

The United States Military and Naval Magazine for September. Washington: *B. Homans.*

The Western Monthly Magazine for September. Cincinnati: *Taylor & Tracy.*

There is a detailed notice of Ariel and her wonderful performances in this number of the Turf Register; and an account current of the Turf warfare—competition would have been a better word—between the North and the South, that will interest sporting men.

The United States Military and Naval Magazine is not brilliant, though there is much that is useful in this number. The "Rambling Notes" are hasty, and therefore unjust, particularly in the remarks about Don Pedro, which are too much like mere boarding house gossip.

The paper on Universal Education, by President Young, of Danville College, Kentucky, is the redeeming article of the Western Monthly.

Republication of the London, Edinburgh, Foreign and Westminster Reviews, by Theodore Foster, N. Y.—At the price of $8 *per annum* we are here presented with an opportunity of possessing four European Reviews: the cost of which, if imported, would be $32. This No.—1—comprises the Westminster Review for January last. The size of the pamphlet is large 8vo. printed in double columns, and in good type. We extract from this, part of a curious paper on Jew's Harps.

Art V.—1. A Sketch of the Life of C. Eulenstein, the celebrated Performer on the Jew's Harps.—London; Welch. Small 8vo pp. 69. With a Portrait. 1833.

2. The Giulianiad, or Guitarist's Magazine. Nos. IV., V. and VI.—London: Sherwood. 1833.

Let no man despise the day of small things. There may be more mystery in a Jew's Harp than a hand-organ, notwithstanding their relative dimensions.—Think of a man's playing concertos on the engine which 'Skinner in his *Etymologicon Linguæ Anglicæ* calls "Cytharæ Judæorum," and says that neither the creaking of hinges, nor the mewing of cats, can be more dissonant and harsh;' on the instrument which 'the Germans call *Maultrommel*,' but of which the vernacular name is *Brummeisen*—'buzzing iron.' Nevertheless

"The performance of Mr. Eulenstein on the Jew's Harp is not only a great curiosity in the musical world, but is, in itself, eminently beautiful. By means of a series of instruments, properly tuned and adjusted, he commands a scale of four octaves and two or three notes,—has a perfect mastery over all the diatonic and chromatic intervals, and modulates with the most graceful facility and the nicest accuracy into every variety of key. By dint of incessant practice, he has overcome a difficulty which at first seemed insuperable: he has acquired a power of stopping the vibration the instant the spring is struck, and yet leaving it free for the next note, so that he can perform the most rapid staccato passages with astonishing brilliancy and precision. But his greatest triumph is the tone which he elicits from his humble and hitherto contemptible instrument. We have all heard its dissonant twang when touched by the rude finger of the schoolboy, and even ears unmusical have turned away in aversion from its monotonous grumbling; but in Eulenstein's hands, the tongue of iron speaks with most soft and silvery voice, and pours forth its sweet and tender notes with such delicacy and taste, that at the close of some pathetic melody, the ear drinks in the dying sound with breathless attention, and continues to listen after the enchanter has ceased. A great variety of effect is also produced; a firm, though gentle, note reminds us of the violin,—in that clear harmonic sound a tiny bell is heard—and, when dead silence is preserved, (which ought always to be the case,) and all is quiet without and within, fairy strains creep about the room in undulating harmony, now nearer, now more distant, as if a moving chorus of airy little beings, in their tenderest mood, were delighting themselves in song.'

'The scene changes, and the trumpet sounds—the reader smiles incredulously—the trumpet! a Jew's Harp! nevertheless, gentle reader, the tone, though a minature likeness, *does* resemble that of the trumpet, and at the head of Lilliputians would lead them most inspiringly to the onslaught. These various results are effected by the performer playing sometimes only on one, but generally on two, and occasionally, on four instruments at a time: sixteen lie before him, and he takes them up, and puts them down in turn with the greatest ease, and without the slightest interruption to the melody.'

'There is nothing peculiar in their construction; some attention may perhaps be paid to the elasticity of the spring, and they are brought into accurate tune by loading the extremity of the tongue with a little sealing-wax; but in other respects they are precisely the "Cytharæ Judæorum of which Skinner speaks with such unmixed abhorrence.'

'The reader who has any curiosity in such matters, may now be disposed to inquire how Mr. Eulenstein came to make choice of so unpromising an instrument; and as the circumstances under which he was driven to this are somewhat singular, as no little energy and decision of character are displayed, it is believed, that a brief memoir of his life will prove acceptable to all those who take an interest in the cultivation and developement of talent under opposing difficulties and occasional deep distress.'

Charles Eulenstein was born in the year 1802, at Heilbroun, in the kingdom of Wurtemburg. His history is the ancient round of genius, poverty, struggle, pertinacity, and success. His first musical energies were displayed, in insisting on having his father's violin to play on, when he was between four and five years old; and because his father refused, he made a fiddle for himself. His mother, who was poor, disliked supplying him with strings; and so the boy contrived, by pretending he had no appetite till the middle of the day, to get his penny loaf transmuted into a penny before he went to school, and then turned six breakfasts into a fiddle-string. And after all he did not succeed at that time in teaching himself to play; in consequence, as is suggested, of his hand being too small. A well-timed grandfather got him leave to be taught the flute; and he arrived at the dignity of being a chorus singer in the church. The violin also was continued; and at the age of twelve, having far surpassed all his companions, he was considered a very good performer.

His mother, however, insisted that he should be put to business; and believing that music was in books, and that to bind books would be to have them, to a book-binder he went. His master soon complained that he was busy with the inside of books and not the out; and he was translated to a shop of hardware. Here he might have been happy; but his mistress hated music. Besides his violin, too, somebody had given him a French horn; a perilous piece of hardware for the youthful dealer. The horn was speedily forbidden; and the violin, a guitar, and a tiny flageolet, were all successively discovered and put under the ban. But his destinies were not accomplished; the Jew's harp had not yet appeared upon the scene. As a hardware man, he sold Jew's harps; it was his limited service to sell them for a penny each, to the schoolboys of the town. Like the starving man that first tried oysters, he seized upon the chance, and commenced his experiments.

'In a few weeks, to use his own words, he discovered that there were sounds residing in the Jew's harp, which he had never heard before. He was encouraged to proceed; and one day having heard a gentleman, who came into the shop, perform in a superior manner on two harps at once, he was so delighted, that he resolved to devote his whole atten-

tion to this humble little instrument. For four years he practised incessantly at all opportunities. The greater part of every night was consumed in this occupation; and so fearful was he of being detected by his duenna in such an enormous sin, that he actually hid himself under the bed-clothes, lest the soft and liquid note should reach and offend her ear. One night he fell asleep, with the Jew's harp in his mouth; and was awakened by a scratch in the face from the point of the spring. To remedy the inconvenience in future, he covered it with a little sealing-wax. This, he found, altered the pitch; and, with a quickness of apprehension not a little wonderful in a mere boy, he instantly saw the advantage which might be taken of this circumstance.—By means of loading the end of the tongue, more or less heavily, he tuned a series of harps with the greatest nicety; and was thus enabled, as before mentioned, not only to command a very extensive scale, but to modulate, with surprizing truth and accuracy, into every variety of key. He now labored with redoubled diligence. At the end of two years, his clear and delicious tone was brought to perfection. He had acquired the remarkable power of executing staccato passages with extreme rapidity:—his shake was close, distinct, and beautifully in tune; and all the turns, slides, arpeggios, and various other ornaments and graces, (of which he was the first to discover that the instrument was capable,) were under his command. In short, he was not to be hidden forever under a counterpane. He now began to indulge in dreams of advancement, by displaying to the world his entirely new accomplishment. He collected a few musical friends into a dark room, gave them a specimen of his skill, and required them to name the instrument. They were in perfect raptures; talked about faries and angels, and manifested the greatest impatience to see the cause of all this novel harmony. Lights were brought; and sixteen penny Jew's harps lay on the table.'

One year was expended in curing himself of making faces. He then ran away from the rest of the hardware, with his Jew's Harp's in his pocket; and his mother having withdrawn her fruitless opposition, he set off with her blessing and twenty shillings.—He arrived at Heidelberg, but could not muster courage to commence operations, and so walked on to the next town. Here no inn-keeper would le him have a room. In the next town, a room migh have been procured; but a magistrate who had not notion of 'buzzing-irons,' refused him permission to perform. It seems there are fools on the bench in Germany. With similar success he toiled through Frankfort, Hesse Cassel and Hanover; and walked six hundred miles without effecting in any degree the object of his tour. He sat under a tree for rest, and practised; and spent many a night in the open air. How the pound held out, is a marvel unexplained; there must be humanities in Germany, a pilgrim may remember, but does not talk of. At last he arrived at Luneberg, where he had an uncle of many callings,—'having a large business in the way of letting public rooms,' and being moreover 'the proprietor of a small theatre,' a dealer in 'confectionary,' and in 'wine.' His uncle received him kindly, and made him useful in his manifold employments. It was not till the end of three years, that he obtained permission to give a concert in his uncle's theatre. It was attended with tolerable success; and having saved a little money during his sojourn, he once more set forth, and with precisely the same ill luck as before, walked all the way back to Heilbroun. Once more in his native town, he bought new pantaloons,—for so the florid language of his biographer seems interpretable,—and advertised a concert. But his 'friends' set themselves to raise an outcry, declared he was mad and a vagabond to boot, and tried to force him to return to hardware. To add to his misfortunes, he stitched his last four pounds into a girdle, and left it on a tree when he went into the water to bathe; but whether water-king or kelpie coveted it, was never known, for it was never heard of more. He concealed his loss from his mother, and set out again with a few shillings in his pocket. His success was small; he was driven from the more considerable towns, and with great difficulty obtained enough to support life, by performing occasionally before a few persons in less frequented places. He persevered for some months, and gradually fell into deep distress. His clothes, small and great, as usual, wore out; and many a mile he walked without shoes, that he might have wherein to appear before his audiences. His rents (the *hole* he had, as Mr. Hood would say) grew every day more perplexing and unmanageable; and with the fear of nakedness before his eyes, he was compelled to turn his steps towards Stuttgard. He found a master,—in what employment is not said, but he had been used to many,—who advanced him a little money with which to sacrifice to the graces. He was engaged to attend private parties; his fame began to spread; and one day,—the change seems too brilliant for even a German story,—he received an order to attend the Queen of Wurtemberg. His presentation of himself was characteristic of a man who had just been living in sheep-skins and goat-skins, or garments of less excellent endurance.

'When I received the summons, instead of delighting me, it made me tremble very much, for I had never been in the presence of a queen before; and I was afraid that my extreme awkwardness and timidity would prevent me from playing well. When I entered a long room, in which the Queen was, her Majesty was sitting quite at the other end; but, instead of walking on till I came sufficiently near, I instantly began to bow; and, all the way I went, I kept making a great many bows towards her Majesty, none of which she saw. The Queen spoke to me repeatedly; but I do not know what was said, I was so frightened. All I remember is, that she was kind in her manner, pleased with my performance, and that a letter of recommendation was offered to me, in case I should go to London. I was never happier in my life, than when I returned home at night to my own room.'—p. 33.

After this visit, his circumstances, as may be supposed, improved.

It may be remembered by many of our readers that in noticing some time ago, in our Weekly Review, the then recently published work of Mr. *Schoolcraft*, on the discovery of the Sources of the Mississippi, occasion was taken, on the strength of his own statements and those of Lieut. *Allen* in his Report to the War Department, to censure Mr. Schoolcraft for what seemed an unnecessary and unjustifiable abandonment of Mr. Allen and his command. Mr. S. thus replies, through the Detroit Journal, to this charge:

[*From the Detroit Journal of 5th August.*]

MICHILIMACKINAC, AUGUST 19th, 1834.

Sir: It is not without reluctance that I am induced to call the attention of your readers a few moments to a notice of my narrative of the ascent to the source of the Mississippi in 1832, which is given in the New York American of the 19th of July. Satisfied that the public should settle its measures of literary approval or disapproval in its own way, I should deem it unbecoming to offer any thing, in the nature of dissent, or extenuation, were it not to shield myself from the imputation of having injured a member of the party.

I am charged in the article referred to, with lapses of duty in regard to Lt. Allen, who accompanied me in command of the escort, and whose skill and assiduity were alone relied on, for topographical observations, delineations and maps. And I am, in consequence, visited with rebuke and reprobation. The circumstance of this officer's falling behind the party, a few days, on the home route through the St. Croix, is imputed to no other cause than an intention on my part to desert him, and leave him to pursue his way, without adequate means; and all this, as the writer asserts, while travelling "through an enemy's country, and liable to be cut off at every moment."

To those who are acquainted with the geographical features of the country, it will not be necessary to say a word about its being *an enemy's country*.—It is occupied exclusively by the Chippewas, who were quite friendly, received us every where with cordiality, and freely gave us every aid in their power. It is true, Mr. Allen encamped at lower points in the valley for several of the last days of our ascent of the river, but he was as safe as I was, and neither he nor myself felt any apprehension from Indian hostility. Our parting was, in its nature, accidental, and arose from the difference of the duties which devolved upon us. We had frequently been separated at other points of the route, where there was more cause for apprehension. I supposed he would come up, during the delays caused by official transactions with the several bands, and had I found any reason for apprehension among them, I should immediately have stopped and awaited his arrival, or gone back with him to St. Peters. But there was neither danger, nor thought of danger, from Indian hostility, although it was known that the Sauc war had broken out, in a skirmish between a party of militia under Major Stillman and some Indians in the northern skirts of Illinois. But the country was so far south of us, and the disturbances seemed of so local a character, that it was only conversed of, as something occurring at a distance. And whatever precautions might have been deemed necessary, had we determined to descend *south* to Prairie du Chien, none were required in going *eastward* into the territories of a friendly nation. Not only were the Chippewas friendly, but they were, and *are*, separated from the territories of the Saues and Foxes by a large part of the Sioux nation. The hostile Indians never came nearer than about 500 miles. But there was still a wider space between us, at the time of our entering the St. Croix. The Black Hawk and his adherents were then in the area between the Rock river and Wisconsin, and when this chieftain reached the banks of the Mississippi, in his flight westward on the 7th of August, it was at a point more than two hundred miles below the mouth of the St. Croix. At that time, the last canoes of the expedition, in command of Mr. Allen, had left the St. Croix altogether, and were, on their *third day's march*, descending the Brulé, and within a short distance of the banks of Lake Superior.

It is unnecessary to dwell on this subject. Had there been any apprehension of danger from an Indian foe, when at St. Peters, it would have evinced gross temerity to have proceeded on the journey without a competent escort. And if a request to this effect had been made to Capt. Jouett, the commanding officer at Fort Snelling, there is no doubt he would have promptly furnished it. As a proof that there was no apprehension on his part, it may be mentioned that he, at the time of our visit, kep a canoe, with a subaltern and a few men, plying between the fort and Lake Pepin, to intercept the illicit introduction of ardent spirits into the Indian country. My impression is, that Lieut. Allen left one, out of two kegs of ball-cartridge at the fort.—The inference is obvious, that *he* entertained no apprehensions, of the nature suggested. There were no fire-arms in my party, except a couple of shot-guns.

I have remarked that the separation from Mr. Allen was unpremeditated. It arose from circumstances which could not be calculated or foreseen, such as the points at which the Indians could be met in council, how long a time would be necessary to assemble them, &c. After getting above the falls of the St. Croix, I waited a number of hours for the ascent of the military at the place called the Two Rocks. I then proceeded up the river several leagues and encamped, and waited here the next day till evening. Some conversation then took place in the party as to our vicinity to Snake river, when it was considered better to proceed a few miles further that evening, to insure our arrival there the next morning. We supposed Mr. Allen would certainly come up, during the council, and the delay caused by vaccinating the Indians. I immediately, however, despatched three Indians to aid him up, and to serve as guides, for his canoes, to the head of the river. There was no purpose of abandonment or the withdrawal of any aid whatever. There was, however, a strong purpose, formed by the double motives of friendship and duty, to make every arrangement to facilitate his passage through the country, and to aid him in the execution of his duties, as I had always done at previous stages of the journey. The Indians of that quarter, being within my agency, were personally known to me, and confided in. Most of them had received their medals and flags from my hands, and all had motives of interest (if nothing beyond it) to yield a compliance with my requests. I had every reason, therefore, to believe that they would faithfully give Mr. Allen and his party the aid I wished. To put his mind at ease as to the route, I directed a map to be forwarded to him from the Forks by the hands of an Indian, which might guide him safely to the spot of debarkation at the head of the river. New guides were provided for his canoes on the Brulé, and provisions deposited at several points to meet any extra demands, which the exigencies of the route might have produced. At Yellow River, at the junction of the Namakagon, and at the Fish Dam on the main fork of the St. Croix, these objects were distinctly attended to, and the Indians prepared for his arrival, and furtherance on the voyage. And again on the second day's descent of the Brulé, and at the mouth of that river where Mongazed and his party faithfully remained to await him with his boat, and at Lapoint where Dr. Houghton, the surgeon, was left to accompany his party down the lake. It was not forgotten that Mr. Allen had no interpreter on the St. Croix, but as he spoke the French language, and Canadians residedin the capacity of trading clerks at the principal villages, it was thought that he would be able

through their instrumentality and some knowledge of the Indians existing in his party, to get along very well. The only point where doubt arose as to the route, was at the mouth of Ox creek, near the source of the river, and the question was which of the branches should be taken. A reference to the manuscript map, might easily have decided this, as the *left hand* fork terminated in lake St. Croix, the actual source and point of landing. Had Ox creek been followed up, his progress would have been arrested in a very short distance by logs and obstructions peculiar to it. The whole length is not over half a day's march, but it is not navigable far. Not more than twelve hours detention could have resulted, at any rate, and such a delay was fraught with no serious consequences.

I will now direct a moment's attention to the organization of the party. This expedition was undertaken by me, not for the purpose of vaccinating the Indians, but of tracing the Mississippi to its source. This object was connected with an effort to restore peace among the Chippewas and Sioux, and to induce them to adhere to the terms of the general treaty of peace and limits concluded with the various tribes, under the auspices of General Clark and Gov. Cass at Prairie du Chien in 1825.—The summer of 1831 had been devoted to these objects among the bands south of St. Anthony's falls, and it was determined to go north of that point the next year, as far as we could get means to carry an exploring party. A project for this purpose was revived late in the fall, but contingent altogether upon the legislation of Congress. In addition to the ordinary appropriations of the year, applicable under the several heads of expenditure in the Indian Department, an act was passed granting a specific sum to arrest the prevalence of the small pox among the Western Indians, a small part of which was assigned to the projected expedition. A surgeon and physician was also engaged who was also competent to take observations in botany and geology.—Mr. Allen received the command of the military escort, but at so late a time that no instruments were provided for astronomical observations. There was no sextant or quadrant to be had in the country, and whatever was done to enable him to indicate and preserve facts important in the civil or military geography of the country, was the result of personal arrangements between that gentleman and myself. How well he has acquitted himself of the task, is only known to those who have examined his combined map, of which the sketch published at Washington, with his report, furnishes but an imperfect conception. All the delineations, and the octavo maps in my narrative, were furnished by him, except the first, which was copied from his delineations by Dr. Houghton.

Two or three remarks may be added respecting the time applicable to this expedition. Having received instructions to effect definite objects, with a definite sum of money, the first question to be arranged was a pecuniary one. It was requisite to employ men, and order every other expense with strict reference to this result. It was therefore a question of time, as well as money. And after accomplishing all that the government actually required, the following out the Mississippi to its source, was left very much to opportunity and personal inclination Much depended upon diligent travelling, and the state of the waters after reaching a comparatively high northern latitude. And not an hour was therefore consumed in useless delay. We were in motion, during the greater part of the time, seventeen to eighteen hours out of the twenty-four, and we averaged 40 miles per day, during the whole time out, including all stops and portages and days of councilling, and of rest—which amounted to about two-sevenths of the time. We travelled slower on the St. Croix than any other part of of the route, owing to the depressed state of its channel.

The area of the former explorations under Gov. Cass was passed over with rapidity. On getting to Cass Lake, the waters were found in a good state for going higher. But the soldiers in command of Mr. Allen could be pushed no farther. It was no time to stand upon points. I procured each gentleman of the party a hunting canoe and two men, and setting out early, reached *the source* the third day. The accomplishment of this end, was to me, the attainment of the great object. Our return was very rapid. We were back at Cass lake in two days. This was the principal theatre of geographical discovery. All who were with me, were actively and meritoriously engaged in the objects constituting their departments of labor and observation.

To avoid retracing our route down the Mississippi, we went over an Indian trail, from Cass to Leech lake. Finding it was practicable from that point to follow a series of portages and lakes, to Crew wing river—an unexplored main branch of the upper Mississippi—we adopted that route, and safely descended that stream to its mouth, which we reached on the 21st July. At this point my narrative closes. About 250 miles below, the Mississippi has its greatest falls, (St. Anthony's) eight or nine miles south of which is the Post of St. Peters. Here the men all enjoyed about two days rest, and the main objects of the expedition here terminated. The only object of interest now was the home route through the St. Croix, for which the requisite arrangements were made. Lieut. Allen re-supplied his command, discarded all that could be considered superfluous from his baggage, and took an additional soldier. I promised to supply him with provisions on lake Superior (which I punctually did) that he might be relieved from its transportation. He requested no further aid, nor did he indicate that he expected me to provide him gum, (an article in daily use on the voyage) or any other article essential in the management of canoes. Indeed, in my opinion, (and I think also in his) he started from Fort Snelling under better auspices than I recollect to have observed at other points. His men had now been accustomed to paddling canoes, crossing portages, and the peculiar labor of ascending and descending rapids, during the season. We had passed through the only portions of the route, where danger from Indian hostilities could have been at all apprehended, namely, *the line of country between Leech lake and the mouth of Crow Wing* river, and perhaps, the *trip to the source*, and also, the place of *crossing the Sioux boundary*. We were about to pass through a section of the Chippewa country, of a character decidedly friendly, and there were no associations connected with the accomplishment of the route, but those of an exhilarating character. It was thought, by traders, that we could accomplish the route in seven days. The party were in reality nine. Lieut. Allen required thirteen, owing to the bad quality of one of his canoes, and the impediments which he has described. It is to be observed that we did not uniformly encamp together, during any stage of the route, except at those points of it connecting important positions, where the Indians were to be met. It was deemed sufficient to be present at those points, and at all others, to keep as much as possible within supporting distance. His absence, therefore, at the first two or three encampments on the St. Croix was not unusual. And I attributed it to a desire to execute a perfect delineation of the river, as he had previously remarked to me the difficulty he found in making observations either very early or very late, on account of the obscurity at those hours. The falls and rapids were not as formidable in number and velocity as those of the St. Louis, which he had previously mastered, and I had every reason to consider the Indian guides, which I had despatched from the first point where their services could be obtained, as competent and faithful as I had found them at other points. I have since learned that their defection was caused by the amount of labor the soldiers expected them to perform, and to some difficulties respecting the quantity of provisions they consumed. Mr. Allen was the disbursing officer of his command; he provided his own supplies, (sometimes by request through me,) and made his own arrangements as to encampment, mode of travelling, &c. If any of these arrangements were, therefore, defective, I hope they are not justly chargeable to me. And if I have failed at any point, to afford *any and every* aid, which my official relation to the party, rendered due to my integral part or member of it, it has been wholly unintentional, and is the result of wants or wishes which were unknown to me.

In the observations which I have made respecting the services and merits of Lieut. Allen, as an adjunct in my recent tour, I have not been unmindful of the tone of his remarks in his journal. But as these remarks, first seen by me in his printed journal (and the first indication to me, of his dissatisfaction,) may have been considered by him necessarily explanatory of the cause of his delay, and as I regarded them rather as the record of first impressions, in moments of excitement under the difficulties and hardships he was obliged to encounter, than as intended to be seriously accusatory, I do not deem it proper to make them the subject of comment.

I should have been pleased if, in the relation of friendship in which we lived, and travelled and parted, he had thought proper to apprize me of the existence of feelings which the journal indicates.

On the subject of the literary criticism in the American, I have not a word to say. I am too sensible of deficiencies in *these particulars*, to doubt that many defects must present themselves to the reader. And I can with candor say, that the reflection and experience of later years, has impressed me with a renewed sense of the indulgence extended towards me by men of cultivated and exalted minds.

In these remakrs, names, dates and places have been introduced as necessary to precision. No person is designed to be injudicously referred to. Justice is meant to be rendered to each of the members of the party, who are endeared to me by many associations, and I should feel mortified, if on a review of what has been written, it is found to have been withheld, in aught, from Mr. Allen, who performed an arduous and meritorious service. So far as localities are specified, their introduction is intended for those at a distance, who must often judge of things of this nature, in the hurry of perusing a newspaper notice. But of this class of readers, it will not be deemed harsh to remark, that they are often compelled (in the imperfect state of north western geography) to rely on the dicta of such notices, the writers of which are apt in the truth of general and prominent conceptions, to annihilate whole areas of country, and bring together people and places the most widely separated. Respectfully.

HENRY R. SCHOOLCRAFT.

SUMMARY.

[*From the Montreal Herald of Sept.* 8.

INTELLIGENCE FROM CAPTAIN BACK.—Mr. Duncan Finlayson, partner of the Hudson's Bay Company, arrived at Lachine on Saturday, the 6th instant, in a bark canoe, navigated by ten voyageurs of that concern. He left Fort Vancouver on the *Columbia* River, North West coast of America, on the 20th March last, passed over land to York Factory, the Company's principal depot in Hudson Bay, which depot he departed from on the 24th July. Two other canoes, manned by sixteen additional voyageurs, are daily expected at Lachine, and the remaining voyageurs and passengers from the interior this season, will be down in the course of the next month, (October.)—Apart from the Company's usual despatches and letters from their servants in the interior, together with those from *Red River* Colony, Mr. Finlayson has brought a packet from Capt. Back, adderessed to the Colonial Office London. We are happy to state that letters have been received from that gentleman, dated Fort Reliance, east end of *Great Slave Lake*, up to the 4th May last, when he was preparing to be off to prosecute the ulterior objects of the expedition. The packet from London intimating Capt. Ross and party's safe return, which was forwarded from Montreal last November, reached Capt. Back on the *25th April.*

[*From the Baltimore American of Sept.* 9.]

The editorial connection of S. F. WILSON, Esqr. with this office having terminated yesterday, we have the pleasure to announce to our readers that we have engaged the valuable and efficient aid of GEORGE H. CALVERT, Esqr. in that department of the *American.*

SAVANNAH, SEPT. 6th—*Loss of the Packet Ship Statira.*—The packet ship Statira, Captain Bartling, from New York to this port, with a valuable cargo of merchandize, took a pilot on Wednesday evening, arrived off Tybee at about 10 o'clock, where she came to anchor between two and three miles east of the light. At 3 o'clock yesterday morning, it blowing a gale from the N. E., she parted her cables and went ashore on the South Breakers, and bilged, having 5 feet water in her hold. Captain B., passengers, and part of the crew, arrived in town last evening for assistance. Hopes are entertained that most of the cargo will be saved in a damaged state.

[*From the Raleigh Register, Sept.* 9.]

TREMENDOUS FRESH.—We have just been visited by the most destructive Fresh that ever occurred in this section of country. Much rain had fallen previous to Thursday last, but on that night it rained in torrents, without intermission, in consequence of which, the water courses rose to an unprecedented height. There is scarcely a mill or a bridge standing within the distance we have heard from, and the injury done to the crop and stock, is immense. The long drouth had previously burnt up the highlands, and our main dependence for bread was upon the low lands. This hope is now blasted, and we fear that we shall have pinching times next Summer.

For several days, travelling was out of the question. Stages could neither go nor come, though the drivers made various attempts to force their way.

We fear that the flood has been general, and anxiously await intelligense from those sections watered by large streams.

[*From the National Intelligencer.*]

FROM THE FAR WEST.—We mentioned in our paper of Saturday last, that the report of a battle between the Dragoons in the West and the Indians seemed as likely to turn out false as true. The mail of yesterday brought us the Arkansas Gazette of August 26th, (in which journal the report was published,) from which we are glad to learn that the story was false from beginning to end. We expressed a hope, also, when we heard of the death of Gen. LEAVENWORTH and the sickness of several officers and many privates of the Dragoons, that the detachment marching westward would forthwith return. It gives us pleasure to state, now, that they did return, as we hoped they would, and arrived at Fort Gibson on the 15th of August. The following are the only particulars concerning their return which have reached us:—

[*From the Arkansas Gazette, Aug.* 26.

RETURN OF THE DRAGOONS.—By a gentleman direct from Fort Gibson, we are happy to learn that the detachment of U. S. Dargoons, under Colonel Dodge, returned to that post on the 15th inst. from their expedition into the country of the Pawnee, Camanche, and other Indians, inhabiting the vast expanse of territory, several hundred miles south and west of our frontier, without the occurrence of any unpleasant collision with the various tribes with whom they opened an intercourse. They have brought in about twenty Indians, comprising delegations from the Pawnee, Camanche, Waco, and one or two other tribes, with all of whom, we understand, treaties of amity have been concluded by Col. Dodge. Some of these delegations have come in with the intention of proceeding to Washington city. Col. Dodge, we understand, procured the release of a little boy, about 10 years of age, son of the late Gabriel N. Martin, of Miller county, who was carried off by the Indiens some months ago, at the same time that his father was murdered by them. A negro man belonging to Mr. Martin, who was captured at the same time, has also been restored.

We regret to learn, says the Montreal Gazette, by private intelligence from Toronto, that the Hon. William Dummer Powell, formerly Chief Justice of Upper Canada, died suddenly in that city on Saturday last.

The Memoirs of Mrs. Hannah More, about to appear, will, it is stated, contain letters by Mrs. Montagu, Sir William Pepys, Lord Orford, Dr. Langhorne, Mr. Garrick, Mrs. Boscawen, Bishop Porteus, Archbishop Magee, and other eminent public characters.

Mr. Audubon.—A letter, says the Boston Daily, from this gentleman, dated London, states, that five subscribers for his great work have recently presented themselves, in that city, and one in Germany. One of the former subcribers, Lord Kingsborough, has subcribed for a second copy.—The Grand Duke of Tuscany is also a subcriber, at the instance of Marquis Charles Torrigiana, of Florence, who visited the United States last year, and is well remembered by many of our citizens, as an intelligent and accomplished traveller. It will be remembered, that the cost of Mr. Audubon's work is of necessity very large, and it is gratifying to learn, that the subscription to it is advancing in Europe.

Mr. Lander.—Mr. Moore, a medical gentleman, and one of the companions of poor Lander when he was so treacherously attacked and murdered, has returned to this country. His account of the fatal transaction only confirms our former statements.—There were very great numbers of the natives, and they appeared to belong to several countries; whether slaves engaged on the side of their masters, or free agents, it is impossible to say. It was evident that the assault had been fully preconcerted. The assailants were provided with fire-arms; and after the first onset, five hundred of them, in about thirty canoes, pursued and fired upon their victims. One white man, a Swede, who had shrunk to the bottom of the boat from the beginning, was killed by nearly the last shot, which entered his head and came out near his mouth.

Lieutenant Allen.—One of the gallant companions of Lander on the expedition, and who left the Niger previous to this sad occurrence, has, we understand, been sedulously employed since his return home, on a chart of the river, so far as it was surveyed on their first ascent. This work, under the authority of the Admiralty, will establish many geographical certainties of much importance. We have heard also, that this able officer has made a number of accurate sketches of scenery, and which we trust will somehow be produced to gratify the public interest.

Middlebury College.—The annual commencement of this Institution was held on the 20th ult. Graduates 25. The degree of D. D. was conferred on Rev. Henry Olin, President of Randolph Macon College, Virginia, and of LL. D. on Hon. Charles K. Williams, of Rutland, Chief Judge of the Supreme Court of Vermont. The new Freshman Class already consists of 16 members. A building committee has been appointed with instructions to proceed with all convenient despatch in the erection of new college buildings.—[Brattleborough Messenger.]

The Disaster on board the steam boat Lady of the Lake, at Quebec, has been thoroughly investigated by a coroner's inquest. It appears that, at the time of the accident, the engineer was intoxicated; and that the boiler had become weak from corrosion. It also appears, that the six persons who lost their lives by the explosion, were William Ronaldson, aged 29, his wife Ellen, and two children; Thos. Moffat, aged 4 months; Grace Pervis, a servant of Mr. R., aged 20 years. Mr. R. and his family recently arrived from Leith, Scotland, and have relations in this country, and was possessed of considerable wealth. It was supposed their two surviving children would not recover. They were all asleep in the cabin, which they had locked at the time of the accident. The captain and engineer are both censured for negligence of duty.

FIRE AT WORCESTER.—The Woonsocket Falls Patriot states that the large dwelling house in Worcester near the Exchange Coffee House, occupied by Messrs. Andrew March and G. P. Rice, was destroyed by fire last Friday night, together with a bakery attached to it. The store, occupied by Messrs. Davis & Farnsworth, and Timothy Keith was saved, though in some degree injured. A barn in the rear of this store was consumed. The house of Mr. Pool, in School street, also sustained some damage.

THE UNKNOWN WRECK.—The following account from the New Brunswick papers, serves to confirm that the wreck alluded to was the Spanish brig *Montanez*, Capt. Pardinas, which sailed from Havana in November last, for St. Johns, N. F. where she has never arrived. She had on board seven thousand Spanish dollars, and was formerly the brig Centurion, of this port.

[*From the St. John Times, of Aug.* 8.]

WRECK AT BACCALIEU.—On Saturday morning last, Wm. Stirling, Esq. a magistrate, James Bayly, Esq. sub-collector of his majesty's customs, John Stark, Esq. coroner, and Messrs. John and William Stirling, left this place in the pleasure boat of the first named gentleman, for Baccalieu, in order, if possible, to glean some further and more authentic particulars relative to the wreck discovered at that place, (no certain information at the time having been made known,) and which has caused so much anxiety in the public mind. We are authorized by these gentlemen in stating, that they arrived at the spot, on the N. W. end of the island of Baccalieu, at 1 o'clock, when the boat was anchored, and six of the party landed and remained on shore for several hours in prosecuting their researches; the wreck was found wedged in, in a deep cavern of the rock, and the remains of four mangled bodies were seen among it, but without great labor and expense they could not be got out: indeed they were found to be in a state of quick decomposition. The gentlemen descended the cavern with lanterns at considerable personal risk. One leg was found near the mouth of the cavern with a boot upon it, which latter Dr. Stirling cut off. The leg was evidently that of a young man, and the boot is what is denominated a Wellington boot; the stocking found upon the leg was assuredly of the British manufacture—it was a fine white cotton stocking, with two red stripes round the top of it, and marked with a large C. in black ink.

Among the wreck was also found some Manilla rope, and a cocoa nut in a perfect state, the husk being removed. Copper was seen upon several pieces of the wreck: she was oak built, copper-fastened, and copper-bottomed, many of the copper bolts being visible; a sample of the rope and an oak stancheon, having a great curve in the lower part, were brought to this town—the canvas was sewed with a flat seam; part of a red striped fine gingham shirt was found. There was also seen the remains of a chocolate colored jacket, part of a woman's bombazet dress, and a part of a hemp cable, nearly new, of about nine or ten inches; several pigs of iron ballast had been taken up by fishermen, three of which were found by these gentlemen at Grates' Cove, measuring 2 feet 4 inches by five and a half inches. It is a most extraordinary circumstance that the cables were not bent to the anchors; it is therefore presumed that the vessel had not made the land—she was found to have three anchors besides a kedge. Three of the crew had been buried decently at Grates Cove some time ago, attended to the grave by the inhabitants.

The party afterwards proceeded to Grates' Cove, where two of the anchors which had been picked up from the wreck were lying—one anchor only was marked on the crown of it with the figures 855, which it was concluded was the number and not the weight; this was the best bower and appeared to be about ten cwt.; they were both iron-stocked. From the best information that could be obtained at Grates' Cove, there cannot be a doubt but 1500*l.* and upwards in Spanish dollars had been picked up in two kegs by ten persons belonging to that place, and divided among them. From all the circumstances it would appear that she must have been a Spanish vessel of about 160 tons.

We have obtained this intelligence and published the same at the particular request of several of our readers.—[Conception Bay Mercury, Aug. 1.]

[*From the Long Island Farmer.*]

BEWARE.—Miss Martineau, the distinguished political economist; is about visiting our country from England, as also the noted traveller Prince Puckler Muskau, from Germany. Both are close observers of manners, and will undoubtedly print a book when they go home. We take the liberty of advising our good countrymen, in showing them the usual civilities, to keep clear of tobacco, quick eating, and self-praise.

FOREIGN INTELLIGENCE.

ONE DAY LATER FROM FRANCE.—We received last night by the ship Yazoo, Capt. Packard, Havre papers to the 2d August, with the Paris dates to the 1st of that month.

The Chamber of Deputies, on the 2d day of its session, had transacted no business of importance. Some difficulty had occurred in relation to the occupancy of the Chair, which of right belonged to the oldest member, but he being a Carlist, had declined attending on the first day of the session—when the King delivered his address, and in consequence another was chosen to take his place. On the second day he presented himself and claimed the chair, which was refused him.

LATER FROM SPAIN.—By the ship *Washington Irving*, from Cadiz, Madrid accounts to the 6th ult. have been received. They impart little news of moment. The Cortes were deliberating on the answer to be made to the Queen's address.

At Gibraltar, Alicant, and elsewhere in Spain, the Cholera was prevailing still, but less destructively.

MADRID, Aug. 5.—From the latest information it appears that the General-in-Chief of the army of the North (Rodil,) had his head quarters on the 29th ult. at San Vincent de Arana; the neighboring towns being occupied by the troops which he took with him, under command of Generals Lorenzo, Auza, and Espartero. On the following day he was to march with these forces against the enemy, commanded by Zumalacarragui, who were not far distant, in the vallies of Goni and in Amescua.

According to intelligence received at Vittoria, Gen. Figuera was in pursuit of some bands of insurgent Alavese.

LISBON, JULY 30.—On the 27th instant, their Majesties arrived in this city from Oporto. His Imperial Majesty the Duke of Braganza, on the day he left that city, issued a proclamation, stating that although not entirely recovered from his illness, he had not been willing any longer to delay his visit to that capital, accompanied by the Queen in order to congratulate the people, in person, on the honorable termination of the civil war. He adds—

"I could have wished to remain more than ten days among you; but the near approach of the day on which the Cortes is to be opened, renders it absolutely necessary that I should be at Lisbon for some time previous. Next year, if my health should permit, I depend upon going with the Queen, by land, to visit the provinces of the North, and on that occasion to have the pleasure of passing several days in this heroic city.

"*Oporto, July* 27, 1834.

D. PEDRO, *Duke of Braganza.*"

Spain.—We copy from the Journal of Commerce the Speech of the Queen Regent of Spain, on opening the Cortes, and other intelligence of some interest from Spain.

Speech of the Queen of Spain at the opening of the Cortes, July 24, 1834.

Through the kindness of a friend, we are enabled to lay before our readers this important document, which has not before been published in the United States. The fact of the opening of the Cortes on the 24th July, was known in Paris and London by a telegraphic communication, prior to the sailing of the 1st of August packets; but the Speech from the Throne had not been received.

Translated for the Journal of Commerce.]

Madrid, July 24.—From the accompanying Gazette Extraordinary, and the Speech from the Throne inserted in it, you will perceive that the birth-day of Her Majesty the Queen Regent was solemnized, according to previous arrangements, by the opening of the General Cortes of the Realm, attended by Her Majesty in person, amid the enthusiastic acclamations of the faithful population of Madrid, and the general joy of all good Spaniards who witnessed this grand and imposing act, to the celebration of which the anxious care of Her Majesty has been directed, ever since she was pleased to decree the Estatuto Real. Her Majesty has brought it to its consummation, by presenting herself before the Peers and Deputies of the Realm, surrounded by the loyal inhabitants of this Court, without suffering her mind to be influenced by the sad anticipation of danger to which her precious life might be exposed in consequence of the sickness which afflicted the capital. Her Majesty will shortly return to the royal residence at San Ildefonso.

On this day, so memorable in the annals of the Spanish nation, all has been joy, satisfaction and rejoicing. The same will be the case in all the towns of the Monarchy, as the cheering news is spread of the opening of the General Cortes of the Realm under so favorable auspices.

Speech.

Illustrious Peers and Deputies of the Realm:

On finding myself this day in the midst of you, the first impulse of my heart, after taking the oath prescribed by the fundamental laws of the Monarchy, as Queen Regent, is to manifest to you the sentiments that animate me, and the gratitude which I render to Divine Providence for having granted my desires.

Closely to unite the Throne of my illustrious daughter with the rights of the nation, by giving to both as a common basis the ancient institutions of these realms, which are so distinguished for prosperity and glory,—such is the noble object which I have proposed myself, and of which there cannot be a more public testimony than that of seeing you assembled within these walls.

But notwithstanding the satisfaction which I feel on this account, it is grievous that this august act is celebrated in the midst of the calamity which afflicts various Provinces of the Monarchy, and which has extended its ravages to this capital. Still more painful is it, if possible, that during the terror caused by the sudden appearance of this plague, which in other countries has likewise given rise to lamentable disturbances, crimes have been committed of a nature so uncongenial to the noble and heroic character of the Spanish people, that they cannot be call to mind without the deepest indignation. The laws will punish these flagrant outrages; yet could I believe your co-operation necessary to prevent their repetition under any pretext, I would confidently claim it: for it is a matter which respects the defence of the very basis of society,—the maintenance of public order, and the protection of the lives and property of individuals.

It also causes me pain, that the first important subject which is to be presented for your deliberation, should be the course pursued by an ill-advised Prince, who even during the life of the King, his brother, began to give tokens of his ambitious designs, and who, since the death of my august husband, has attempted by means of civil war, to snatch the sceptre from its legitimate heir.

Immemorial custom and the ancient fundamental laws of the Monarchy, the practice observed in similar cases, impartiality, justice, everything imposed upon me the duty of submitting to you a subject of such momentous interest. But even were I able to waive so sacred an obligation, as guardian of the rights of my illustrious daughter,—I could not and ought not to forget, that the present tranquillity and future destiny of these realms depends perhaps upon the decision you make. It will be worthy of you; and the nation awaits it calmly.

Not content with promoting rebellion by operating within the kingdom to which he belonged, that Prince fanned the flame of civil war from a neighboring State, and even attempted to enter with an armed force from that frontier. Under these circumstances, the duty of self-defence dictated those energetic measures which were demanded alike by justice, policy, and the honor of the nation. The Spanish troops entered Portugal, not to infringe the independence of a foreign State, but to defend our own rights; and in the course of a few days, the contest was brought to a termination, and the two Princes who disturbed by their presence the tranquillity of the Peninsula, found themselves banished from its territory: a fresh illustration and warning, which points to the issue of every such mad attempt.

Simultaneously with the termination of the Portuguese question, a solemn Treaty was ratified in London, which had for its object a result most important not only to the tranquility of the two kingdoms, but to the peace of Europe. In this point of view, I have great pleasure in manifesting the friendly disposition of which repeated proofs have been given me by my august Allies, the King of the French and the King of the United Kingdom of Great Britain and Ireland; as well as the good understanding which happily exists between the government of Her Most Faithful Majesty Donna Maria II., and that of my illustrious Daughter;—the ties which unite the two kingdoms being so intimate and strong, that each, it may truly be said, is engaged in its own cause, while laboring for the common defence.

Various other Powers besides those above mentioned, have explicitly renewed their political relations with the Spanish government, since the accession of my august Daughter to the Throne; and on my own part, I have recognized some new States, both because I believed it conformable to the rules of a sound policy, and also to prevent interruption and injury to the commerce of the natives of these realms.

It were to be wished that all governments had in like manner reciprocated the benevolent disposition of the Spanish Cabinet; but although none of them have manifested an intention or desire to interfere with our domestic affairs, some have neglected hitherto to acknowledge my august Daughter as Queen of Spain. The laws of the Monarchy have raised her to the throne; the manifest will of the nation sustains her; reason and time will cause due homage to be rendered to the conservative principle of legitimacy.

The aspect presented by the interior situation of the kingdom, is far from being so flattering as your patriotism would desire; but notwithstanding the obstacles which have arisen from a state of insurrection in some Provinces, a want of harmony in others, the exhausted condition of the Treasury, and the pestilence which is prevailing in a great part of the kingdom, it has been found practicable to mitigate unavoidable evils in so critical a situation, and at the same time to introduce salutary reforms—to bring about an early re-assembling of the Cortes—to conquer in all directions the bands of rebels—to increase the strength of the army—to add new glory to our arms in a neighboring kingdom—and in effecting these great results, the decision and enthusiasm of the nation have rendered it unnecessary to require heavy sacrifices from the people.

The fidelity of the army, its constancy and courage, which have entitled it to my special regard, lay a claim upon your co-operation and counsel in aiding me to perfect this important arm of the State, by consulting the welfare of the brave defenders of the throne and the country, so far as the present state of the nation and other demands upon the Treasury permit.

To this end a statement will be laid before you, showing the various obligations which the government has to meet, the resources which it is able to command, and the extraordinary means of credit to which it will have to resort for this once, both on account of former losses and defalcations, and by reason of existing circumstances, as well as to avoid increasing the burdens of the people. But as frequent resorts to extraordinary loans are injurious, and would eventually be impossible, the greatest regularity in the administration of the finances, a prudent and rigid economy, publicity, and the intervention of the Cortes in the estimate of expenses and the imposition of public taxes, (contribuciones,) would ere long have the desired effect of making the resources of the nation correspond with its necessities. This hope is the more to be relied on, as it will further be encouraged by the arrangement of the entire foreign debt in a manner consistent with our actual resources, supported by the frankness and good faith which are the rule of my government, and also by the improved condition of our domestic debt, and its progressive extinction, aided by such funds as it is found, after careful examination, can be spared for that purpose.

My Secretaries of Despatch will likewise make you acquainted with the practical reforms which have been introduced in various branches of the administration. The division of territory, the separation and distinction between the administrative and judicial departments, the suppression of the old Councils, the new Audiences created for the benefit of certain Provinces, the removal of many obstructions to the developement of the public wealth, the relief of the people from sundry onerous exactions, and other improvements which are in progress, will show you my ardent wishes, while they hold out to the nation the most flattering prospects. Nevertheless, your intelligence and wisdom will readily perceive that it is impossible to remedy in a few days the evils which have been accumulating for ages, and that oftentimes the very effort to accomplish at once what ought to be the work of time, has prevented a happy result, and put at hazard the destiny of nations.

The Estatuto Real has laid the foundation; to you it belongs, illustrious Peers and Deputies of the realm, to see that the work goes on with that regularity and concert which are pledges of stability and firmness.

As it respects myself, you will at all times find me favorable to whatever can promote the welfare and prosperity of Spain. In the few days that I have exercised, *ad interim*, the supreme power, agreeably to the will of my august husband, I have shown what were my intentions and desires, viz., to bury in forgetfulness the vestiges of past evils, to engraft upon the present state of things such reforms as are practicable, and to prepare the way for other improvements in time to come. Whatever obstacles I may encounter in this difficult undertaking, I hope, with the favor of Heaven to overcome them, sustained by your efforts, and relying upon the support of the nation. To regard its felicity and glory as my own, I have only to remember that I am the mother of Isabel II. and the grand daughter of Charles III.

The President of the Chamber of Peers is the celebrated Duke of Bailen, better known as General Castanos. He received his title in consequence of the splendid victory which he gained at Ballen in 1808 over 30,000 French troops commanded by Gen. Dupont, all of whom were either killed or taken prisoners. He is between 80 and 90 years of age!

On the evening of the 24th, the city of Madrid was brilliantly illuminated, as a token of rejoicing for the memorable events of that day.

The proceedings of the Cortes on the 25th were altogether preliminary.

Another Conspiracy discovered at Madrid.

On the nights of July 23d and 24th, a number of persons were arrested, among whom were his Ex. the Duke of Saragossa, Gen. Llanos, Alexander O'Donnel, Jose Garcia Villarta, Juan Van Halen, Romero Alpuente, Calvo de Rozas, Olavarria and Avilaneta. It is stated also that an attempt was made to arrest Sr. Palarca, but he was not to be found at his dwelling. These arrests were in consequence of the discovery of a conspiracy, "the object of which," says a Madrid handbill of the 24th, "was the most atrocious which can be imagined." Some particulars of this affair are contained in the following extract of a Royal Order, dated Madrid, July 24th:

"For some time past, the government of her Majesty has watched the movements of certain individuals, who being always dissatisfied with those systems which can give force to the laws and tranquility to the people, were resolved to keep society in a perpetual state of convulsion. These men, uniting hypocrisy to perfidy, assumed as a mask for their machinations a false regard for the august object which forms the hope and joy of good Spaniards, while the true design of their disguised projects was to overturn the government of her Majesty and the Estatuto Real—thus subverting the plans of the enemies of the country, who desire to see it powerless, divided and despised. For the greater confusion of the conspirators, her Majesty chose to defer surprizing them until the evening before the day in which they designed to give the signal of revolution in the Sanctuary of the laws, which her Majesty opened today, amid the rejoicing and acclamations of the friends of true liberty. Some of the persons, when arrested yesterday, had about them evidences of their projects, which were delivered to the Judges for examination, in order that without delay condign punishment may be inflicted upon the villains and their accomplices." * * *

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☞ Ninety-five tons of 1 inch by ¾ inch, } *Flat Bars* in
200 do. 1¼ do. ¾ do. } lengths of 14 to 15
40 do. 1½ do. ¾ do. } feet counter sunk
800 do. 2 do. ¾ do. } holes, ends cut at
800 do. 2½ do. ¾ do. } an angle of 45 degrees with splicing plates, nails to suit.
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250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2¼, 2⅜, 2½, 3, 3¼, 3½, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

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Ship and Boat Spikes made full size under the head, so as not to admit water.

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They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

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The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf R M & F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street,
jl 6t corner of Maidenlane.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY B. CAMPBELL, Eng. Philad.,
ml 1y Germant. and Norrist. Railroad

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street,
New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation.

J 25 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m26

[For the New York American.]

INDIAN SKETCHES.—NO. IV.

Departure from the Grand Pawnees.

The morning at length arrived upon which we were to take our leave of the Grand Pawnees, and shape our course to the village of the Pawnee Republican, which is situated upon the Loup fork of the Platte River, about twenty miles distant from our present abode.

The couriers who had been appointed to carry the tidings of our approach to the nation, had left the village the night before. We were now drawn out in the area in front of the lodge, awaiting the movements of the soldiers who were scattered around, some driving in, and others searching for, the horses, on the small islands of the Platte.

The Chief of the Pawnee Republican Village, after lingering with us until the last moment, had started forward across the river, and now in the dim distance we could perceive his flake-white horse skimming like a bird over the crests of the hills, or disappearing in their deep undulating hollows, and then again flashing for an instant on the eye as he flew over the brow of some more distant ridge. He was pushing forward to reach his village and marshal his warriors.

In about half an hour, the soldiers having returned from different quarters, driving in front of them the horses, now commenced saddling in preparation for our departure.

In the meantime, those of the Indians who had promised horses on the first day of our meeting, now brought them up. A young Indian first came forward, and led up a bright, jet black mare—after him followed another, holding in his hand a long Buffalo tug, or halter, which restrained the wild motions of a two year old colt; his color was a snowy white, here and there broken with spots of brown. He had been caught wild from the prairies but a few weeks before. He was a slave, but he had never been mounted; his back had never bent to a burden; they led him up in his own native wildness—his tail stood out—his ears were pricked up—his eyes starting—his nostrils expanded—and every hair of his long mane seemed almost erect with an undefinable feeling of terror. At one moment he dashed swiftly around at the full stretch of the long tug which secured him—then pausing and shaking his long mane over his head, he fixed the gaze of his almost bursting eyes upon his captor. Then raising his head, and casting a long, lingering, and almost despairing, gaze upon the hills of the prairie, which till then had been his home, he made a desperate leap forward, dragging to the ground the Indian who held the end of his halter, but others rushed to his assistance and held him in. The crowd then attempted to close around him, but he reared upon his hind legs and kept them at bay with the rapid and powerful blows of his fore feet.

At length a young Indian who was standing near, threw off his robe: he crept cautiously towards the animal from behind, and then with a sudden leap he bounded upon his back, and seized the tug which was secured in his mouth. Before this, the efforts of the animal had been violent; but when he felt the burden upon his back, when he felt the curbing hand of his rider, he sent up a shrill and almost frantic scream; his form bounded in the air like that of the active wild cat; he reared, he plunged, but in vain, his rider was a master hand, and retained his seat as unmoved as if he had constituted part of the animal itself; he curbed him in, he lashed him with his heavy whip until he crouched like a dog upon the prairie; his spirit was crushed; and the last spark of freedom was extinguished. Shortly after, one of the hunters came up and tied a pack upon his back; he made no resistance, and they led him off with the rest to finish his days in drudgery and toil.

In the meantime the other Indians had led up their horses. It was evident that many of them had been urged to the commission of these acts of liberality by the excitement of the moment alone, and were now fulfilling them as matters of conscience, not of inclination; and their horses were valuable in proportion: one was lame, another blind; one led up a horse with large patches of skin galled from his back, and the ears of another were cropped close to his head. In fine, it was evident that they had selected the very worst of all their animals for the fulfilment of their promises; and four *stud* was a collection of the maimed, the halt, and the blind. One after another they had led up their horses, until one Indian alone lagged behind. The Chief inquired for him, and was told that he had gone out to search for his animal: ten minutes elapsed; and at last there was a movement in the crowd, and a sly-looking old white headed Indian made his way through them, holding in his hand the end of a long buffalo tug; the other was secured to his horse;—such a horse! he was blind of both eyes; his tail had been cut off short to his rump; his ribs stood out in bold relief; and the very joints of his legs creaked, as he walked stifly after his leader. As for his age there was no mode of telling it, as his teeth had long since dropped out from sheer antiquity; but it must have been incalculable.

There was a smothered giggling among the women, and a downright squall of laughter among the children, as the steed stalked forward towards its future owner. The old Indian moved towards Mr. E., and without raising his head, he placed the end of the halter in the hand of one of the soldiers.—There was a deal of mischief in his look, and I could hear a smothered chuckle rattling beneath the folds of his robe, as he drew it up over his face, and disappeared among the crowd.

When he had left, the party mounted and started at a rapid pace for the banks of the river. The heavy lumbering wagons followed more slowly after us, and a train of about half the village brought up the rear.

Upon reaching the banks we found that a party of about twenty Otoe Indians, who had accompanied us, were already on their way through the river. Some were wading up to their arm-pits in water; others, who had missed the ford, were seen floating down the stream, holding their blankets high over their heads to keep them from the water, and struggling across the rushing current which was sweeping them far down the river. Others, mounted on horses which they had trafficked for with the Pawnees, were dashing and spattering through the shallow parts of the river, or clinging to the manes of their steeds, as they ploughed their way through the deep parts of the muddy current.

The river at this place was nearly two miles broad, here and there interspersed with small islands. At some places the depth was but a few inches, at others it must have been from ten to twenty feet, ever varying. At one moment you were in water scarce reaching the fetlocks of your horse—the next step sent him floundering up to the holsters in some deep hole in the bottom.

After reaching the banks of the river, a short consultation was held; the heavy baggage wagons were then sent forward, with two Indians to guide them over the ford. After them followed two light dearborn wagons; one was driven by an old soldier who kept steadily in the wake of the teams. Two mules, who had acquired quite a character for obstinacy, drew the other. They were driven by a half-French half-devil boy, who was seated upon the dash board of the wagon, swearing in broken English, sometimes at the animals, and at others, at the slow pace of the oxen which dragged the wagons in front.—For some time he followed steadily in their train; but at length his patience became exhausted, and he determined to drive forward at all hazards. He plied his whip upon the flanks of the mules. At the first application they stopped short—at the second they kicked up, but at the third they commenced moving forward—for they had learnt by long experience, that patience and perseverance of their driver in the application of his lash, was sufficient to overcome even their own almost inexhaustible fund of obstinacy and ill-nature. Half a dozen steps brought the water up to the bottom of the wagon. The mules doubted, but the driver whipped on. Another half a dozen steps and the water gushed over the sides into the wagon—still the lash was busy. The next moment the beasts were swimming with only the tips of their noses and ears visible above the surface—the wagon had disappeared beneath the water, and the head of the driver, shaded by a broad-brimmed hat, went skimming along the surface, pouring out a steady stream of French and English oaths, jumbled into one common mass. Occasionally an arm was flourished above the water, inflicting a little chastisement upon the nose and ears of the animals, which caused them to dip under the water with a prodigious increase of snorting, but not much acceleration of their speed,—but at length the deep water was passed, and after drifting about a hundred yards down the river, the wagon gradually rose above the surface, and travelled slowly up the opposite bank.

The rest of the party then commenced their march in Indian file across the river, keeping in a line with a tall Indian, who led the way across the ford. Most of the party followed the guide; but the horses of some of us grew restive, and missing the ford, we drifted a short distance down the stream. Here we reached a small island, and scrambling up its bank, we galloped across to the opposite side. Here we found the young wife of the Iotan, Chief of the Otoe Indians, standing in the edge of the water. She was about twenty, tall and finely formed, and her face, next to that of the wife of the Kioway Indian, was the most beautiful of any of the Indian females we had ever met with. Her hair was parted across her forehead, and hung down upon her shoulders; a small jacket of blue cloth was fastened around her shoulders and breast, and a mantle of the same was wrapped around her body. They had been presented to her by the Commissioner but a few days before. She was standing upon a small sand bar, and the water was gurgling around her feet; a short distance in front of her the deep channel was rushing with a powerful current. She looked at the water and then at her dress with an expression of almost childish sorrow. To swim the river would ruin them; the Indians had all reached the opposite bank, and were waiting for the rest to come up, so that there was no assistance to be expected from them.

Just then the hunters dashed by her into the deep channel: they did not even notice her; they were used to such sights. I was the last of the party, and she knew it; for though we could not speak the same language, there was an imploring expression in her large dark eye as she fixed it upon me, that told every thing. Still I hesitated: I thought of pushing on; there was a powerful struggle between selfishness and a desire to assist her; she saw it, and speaking a few words in her own silvery tongue, she at the same time pointed to her new dress.

There was something so sorrowful in the tone and gesture, that I could not resist it. I took my rifle in my left hand, and reaching out my right, she seized it; she placed her foot upon mine, and with a sudden bound she was upon the back of my horse, stooping behind me with her arms around my neck. The horse upon which we were mounted had so long been accustomed to have his own way in every thing, that he grew very indignant at this new imposition, no doubt looking upon it as an infringement upon his prerogative—but a heavy lunge of the spurs subdued his wrath, and he bounded forward into the rushing river. He was a powerful beast, and took to the water like a sea fowl; the river rushed and roared around us with an almost dizzying velocity, and we could feel the strong nervous quivering of his limbs as he bore up against its violent impetus. But occasionally as he went snorting along, he cast back spiteful glances at his riders; I expected mischief, and it came to pass. We felt his hoofs touch the botttom—three leaps—he was up the bank—his heels flew in the air—the arms of the squaw were jerked violently from my neck, and I saw her form describing a somerset through the air; she landed upon her feet, and received no injury. The Indians raised a shout of laughter, and the relieved horse now being satisfied, commenced his journey towards the Republican village. I.

To * * * * *

Go, false one! quaff the sparkling wine,
Let blushing morn still find thee
To lips more lovely pressing thine,—
Oaths were not made to bind thee!
Thy brow with gaudiest wreaths adorn;
But ere the revel closes,
Beware of many a lurking thorn
Amidst the withered roses.

Go—mock these burning tears that fall
For fond devotion slighted;—
Exult, if memory recall
Thy vow so falsely plighted:
Away—to others pledge that vow
To me thus idly spoken;
The heart so lightly valued now
Thou'lt prize perchance—when broken.

RAILROAD AND CANAL MAP.

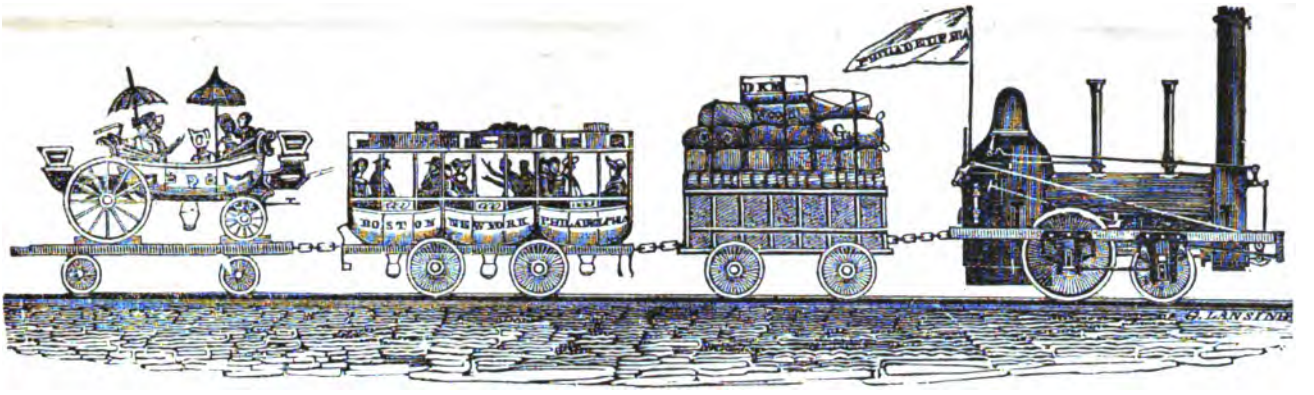
THIS long promised Map is now ready for those who wish. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by

A12 tf D. K. MINOR & J. E. CHALLIS.

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jarvis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, SEPTEMBER 27, 1834. [VOLUME III.—No. 38.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, SEPTEMBER 27, 1834.

To the Editor of the Railroad Journal.

Sir,—As a director of a railroad company, intending to commence operations in the ensuing year, my attention, in common with that of those associated with me, has naturally been directed towards the public works that have already been constructed in this country.

But while, through the medium of their yearly reports, an opportunity has been afforded of becoming acquainted with the forms and cost of the different modes of construction that have been adopted, there is no data by which to judge either of their durability or the comparative facility by which transportation is effected on them.

We have sensibly felt the want of information on these two latter points, and as the different treatises on the subject of railroads contain but little on which to form any opinion, there is no resource left to us to obtain the knowledge we desire, but an appeal, through the columns of your valuable paper, to the engineers or agents who may be connected with works of a similar character. We do this in the sincere hopes that those who are possessed of the facts that may serve to throw any light on the subject, may feel the inclination to communicate them. Believe me, truly yours,

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We have cheerfully inserted the above letter in our (would that it were) "*valuable* Journal," with our equally sincere hopes that some one of our readers may comply with the request.

Since the establishment of our paper, it has been our constant aim to collect and disseminate every information connected with the subject of railroads. But while, alas! we have duly communicated to our readers the facts, as we learn them, of a company having organised and commenced their work, we have seldom had it in our power to furnish any thing of the details connected with their succeeding operations. That this has not been our fault, we can conscientiously assert. Seldom does a week pass by without some, as we intend to be, stirring appeal to our readers for communications. To be sure, their lack of zeal has been productive of this one advantage to us, that oft, when scarcely knowing how to eke out a scanty paper, the "printer's devil" has cried out "copy," we have taken up our oft-recorded "appeal," and after slightly altering it, for its substance must ever be the same, handed it over to him, to supply the vacancy we would fain have otherwise filled. Surely, the "note," "scrap," and "common-place books," of our different engineers, are an ample store-house, from which, if they felt so disposed, they could draw an abundant supply of valuable matter connected with the different works they have had in charge. If each one would contribute a portion even of the information that he thus collected, it might be the means of circulating a mass of facts productive of mutual advantage.

Sincerely do we believe that, if this information could be thus disseminated, many projects of internal improvement, in which the interests of our people are materially concerned, from an accurate knowledge of the cost, and advantages of those already constructed, receive that impetus which, urging them to an early competion, would prove to be an additional source of honor and profit to the members of that profession to which we address the above remarks.

Columbia and Tennessee Railroad.—It is with pleasure we state that Col. S. H. Long, of the United States Corps of Engineers, arrived at this place on the 25th inst., on his return to Memphis. Col. Long has been engaged for nearly three weeks in the arduous and fatiguing duty of making out an experimental survey of the country from Memphis across Cumberland mountain, for the location of an extensive railroad to unite the waters of the Mississippi with the Atlantic, by the broad waters of Chesapeake bay. From gentlemen who conversed with him, during his short stay here, we have learned that the profile of the country is most favorable for the undertaking, and that the altitude and inequalities of the Cumberland mountain are much less that was calculated on; in fact, that he has found a route over the mountain, where it does not exceed an elevation of more than 500 feet, and otherwise forms no serious obstacle. We anxiously look for the report of this scientific engineer.—[Columbia Observer.]

Col. Long's Survey.—The following paragraph, from the Jackson Truthteller, is at once encouraging to the friends of the railroad, and indicative of that laudable spirit of co-operation which we are pleased to see manifested in different portions of the State, and which is alone calculated to give rapid and successful progression to the great public enterprize in which our people are so wisely embarking:

"The country from Jackson to the river was pronounced by him to possess facilities and advantages for the construction of the road, unrivalled by any portion of the United States. The difficulty of passing over the Buffalo Ridge will be much less than was at first anticipated. So far, then, nothing, except the will of an enterprising people, is wanting to accomplish this great work. Middle Tennessee will offer no natural obstructions but what may be easily removed ; and if—as Col. Long confidently believes there can—a passage can be found through the Cumberland mountains, the way will be open, and a most favorable time offered, for the accomplishment of a work of internal improvement, the most magnificent in the Union, and one, too, which will advance Tennessee to the very climax of wealth, prosperity, and happiness."—[Ibid.]

Great Castings.—The Screw Dock Company, in New-York, has just imported a pair of hydraulic presses, to be used in raising ships of a large class. The castings for these presses are enormous. The cylinders weigh sixteen tons each, and measure about seventeen feet in length, and nearly three feet in diameter. The original cost was £15 or $50 a ton ; the freight in the packet ship George Washington, £150 sterling, or $700 ; the duty $800 ; and the expense of landing them from the ship $200. The gross cost is but about five cents a pound. We presume that so large castings as these have never before been seen in this country. The founder in England stated that it had occupied forty men two days to remove them from one side of his shop to the other.—[Journal of Commerce.]

We cheerfully give place to-day to the following letter, and shall continue, from time to time, the extracts from the pamphlet, that accompanied it, for the consideration of our numerous readers. Although, as Mr. Mills observes, it is somewhat opposed to the doctrines generally advocated in our columns, our paper of to-day will certainly give evidence to him, at any rate, that those doctrines are not exclusively advocated. Whatever may be our individual opinion as to the comparative merits of the substitute he proposes, for our railroads and canals, we have never for a moment pretended to set up our opinion in opposition to, and neglect of, that of others. Our paper is intended to be a "neutral ground," on which opinions may be interchanged without fear of being controlled by any thing like a censorship on the part of the editor.

New-York, Sept. 7, 1834.

To the Editor of the American Railroad Journal:

Sir,—Though the subject of the enclosed pamphlet may seem to oppose the object of your valuable Journal, yet as you have in view the public interest, and the forwarding the great subject of internal improvements, you may perhaps examine and give an abstract view of the contents of the pamphlet.

Our citizens have laid out so much capital and labor in the construction of turnpike roads, that it is important they should be rendered more useful and profitable, by which the public interest will be promoted, and the spirit of monopoly counteracted. The improvement of our turnpike roads, with a view to the operation of steam carriages upon them, would open a new era in our country, and give an increased impetus to internal improvement, as the expenses of making such a road would be within the means of every part of our populous country to effect, and we may imagine the amount of business which our citizens would derive from such a state of things.

Very respectfully, Sir, yours,
ROBERT MILLS.

Substitute for Railroads and Canals, embracing a New Plan of Roadway, combining, with the Operation of Steam Carriages, great Economy in carrying into effect a System of Internal Improvement. By ROBERT MILLS, Engineer and Architect.

TO THE PUBLIC.

The following papers are now in a course of publication in the newspapers of this city; but, from the press of Congressional matter, some time may elapse before the series can be completed; and as many works of internal improvement have been projected, to be early carried into execution, the writer deems it best to present them in this collected form, that the whole subject may be examined at one view.

The success which has attended the introduction of *steam carriages* on the *common* road in England, promises for these vehicles, working upon an *improved* roadway, a complete victory over the same motive power operating on railroads and canals, simply on the ground of *economy;* as the main point of consideration with those who embark capital in works of this nature is, What plan will yield the best interest to the capital invested?

Every investigation on the subject of steam carriages running on common roads goes to prove their practical utility; and that it only requires an improved state of roadway for their operation, to secure their general introduction, in preference to every other plan of transportation; nay, some of the advocates of steam carriages, working on even common roads, have gone so far as to assert, on reviewing their efficiency and economy, that in comparison, "railroads, excepting in very peculiar situations, are behind the age; and that those who embark capital in constructing them, will be great losers." Though the writer does not entertain this idea, yet his impression is, that a more profitable investment of capital may be made, in adopting the proposed improvement of the common road, and putting steam carriages to work on the same, than in constructing either railways or canals.

Washington City, May, 1834.

NO. I.

The great expense of constructing railroads and canals, and the limited speed which, with safety, is admissible upon them, make it a desideratum to devise the means by which both of these obstacles may be overcome, and especially the first, which must eventually retard the spirit of internal improvement in every part of the world.

The immense benefit which has been realized by the introduction of steam for horse power, and the capacity of locomotive carriages to overcome obstacles of ascent and descent on common roads, which are not attainable on railroads or canals, promise for these vehicles a victory, on the ground of economy, working under favorable circumstances of roadway, far exceeding what has been achieved on railroads or canals.

Before entering upon a description of the plan of the proposed substitute for railroads and canals, let us examine into the practical results from the introduction of steam carriages upon common roads, which will enable us better to appreciate the value of the substitute proposed.

According to a report of a Select Committee of the House of Commons of Great Britain, (which Committee entered into a very minute and critical examination of the evidence given before them, on every point connected with the operation of steam carriages on common roads, and their utility for public purposes,) the following was the result of their conviction. We give it in the language of the report.

"The inquiries made have led the Committee to believe that the substitution of inanimate for animal power, in draught, on common roads, is one of the most important improvements in the means of internal communication ever introduced. Its practicability they consider to have been fully established; its general adoption will take place more or less rapidly, in proportion as the attention of scientific men shall be drawn, by public encouragement, to further improvement."

Washington, January 1, 1834.

NO. II.

The *very first* extensive trial of steam coaches, as agents in draught on common roads, was made five years ago, by Mr. Gurney, who travelled from London to Bath, and back, in his steam carriage; and, though part of the machinery was broken at the onset, yet he performed eighty-four miles in ten hours, including stoppages.

When Mr. Gurney gave in his evidence before the Committee, in 1831, he stated there were twenty to forty other steam coaches building by different persons, all of which have been occasioned by his decided journey of two hundred miles in 1829.

Mr. Farey, a practical and scientific engineer, stated to the Committee, that he had no doubt whatever, but that a steady perseverance in the trials made will lead to the general adoption of steam carriages, and was satisfied that their speed might be eight or ten miles per hour.

Mr. Gurney stated that he kept up steadily the rate of 12 miles per hour,—that the extreme rate at which he had run was between 20 and 30 miles per hour.*

Mr. Hancock reckoned that with his carriage he could keep up a speed of ten miles per hour without injury to the machine; and Mr. Ogle stated that his experimental carriage went from London to Southampton, in some places, at the velocity of from thirty-two to thirty-five miles per hour—and further, they ascended a hill, rising one in six, at sixteen and a half miles per hour, and four miles of the London road at the rate of twenty-four and a half miles per hour, with a load of people. Also, that his engine was capable of carrying three tons' weight in addition to its own.

* A very curious fact was mentioned by Mr. Gurney, with reference to an accident which happened, namely, "that the carriage, when upset by Sir Charles Dance, was, at that time, going at eighteen miles an hour, but no injury happened, either to the machinery or the persons upon it; still I am of opinion, says Mr. G., that this speed might be maintained, with perfect safety, by little experience in practical management."

Mr. Russell's Steam Carriages.

[From the Edinburgh Observer.]

Through the medium of a letter received from Glasgow, we are happy to record the great and increasing success of these carriages. Our friend writes, that having recommenced their regular business-career on Wednesday morning, they ran throughout the day with the utmost punctuality. The rate of speed may be judged of from the following statement sent us: 1st carriage, No. 4, 30 minutes; 2d, No. 4, 34 do.; 3d, No. 3, 45 do.; 4th, No. 3, 46 do.; 5th, No. 1, 25 do.; 6th, No. 1, 25 do. The distance here taken is from Tradeston, Glasgow, to the Tontine Inn, Paisley; for although the carriages start from George's square, they are of course not put to their speed until they have got clear of the crowded streets; but as this distance is at least seven miles, the rate attained by the last mentioned vehicle, which we understand is the one containing the most recent improvements, is not much less than 17 miles per hour. Another circumstance, we are glad to hear, was that so highly have the public in that quarter already begun to appreciate this new mode of conveyance, that the carriages were overloaded with passengers the whole day. We observe, however, that the trustees of the Glasgow and Paisley road are by no means favorable to the undertaking, and have been for this week past busying themselves in laying down immense heaps of stones on all the ascents and *best* portions of the road, for the apparent purpose of obstructing the progress of the carriages, though hitherto without effect. This conduct, as might have been expected, is meeting with the general indignation of the people in that quarter.

[From the Glasgow Courier of July 1.]

We have much pleasure in noticing the last two days' most successful performance of the Glasgow and Paisley steam carriages. On Wednesday the carriages performed six trips, running every hour from ten till three o'clock, and yesterday an equal number. The carriages were crowded with passengers, and so great was the anxiety to obtain seats, that although there is accommodation for twenty-six, it was found impossible to prevent upwards of thirty persons from taking seats upon them. The average velocity of the carriage is twelve miles an hour, and the only impediment to a high rate lies in the extraordinary state of the road, which should at this moment be in the best possible condition, but has just been deeply bedded with broken stones, laid on in large masses, for the purpose of injuring the carriages. This is a line of illiberal policy, which it is hoped the trustees will not persevere in, as it cannot possibly in any way affect the success of the carriages, which will assuredly be carried through with advantage, while the road is thereby rendered unfit for the purposes of general traffic, at a

great expense to a public trust. At the sixth trip upon Wednesday last, and as the steam carriage was coming up to the new metal, it was found that enormous heaps of stone had just been laid down; and the tremendous power requisite to bear through it smashed one of the wheels, and detained the carriage till it was replaced.

[From the Glasgow Herald.]

On the evening of Friday last, a highly interesting experiment was made upon the Paisley road for the purpose of ascertaining the comparative merits of two of the company's carriages upon different constructions. A little after six e'clock the carriages left George's square, with a full supply of fuel and water adequate for eight miles. The carriages proceeded together through the crowded streets, as rapidly as safety would admit, and along the Paisley road to a point a little beyond the two-mile house, where they turned and started together. After keeping exactly together for about a quarter of a mile, the carriage on the improved construction began to show a manifest superiority, and rapidly distanced the other; and on arriving at the Gorbals, Glasgow, had gained half a mile, having done the whole distance in seven and a half minutes, while the latter required ten minutes. The same carriage had, on the previous Wednesday, done the distance from the Tontine at Paisley to the Gorbals of Glasgow, being seven miles, in thirty-three minutes, including stoppages.

[From the Glasgow Courier of July 4.]

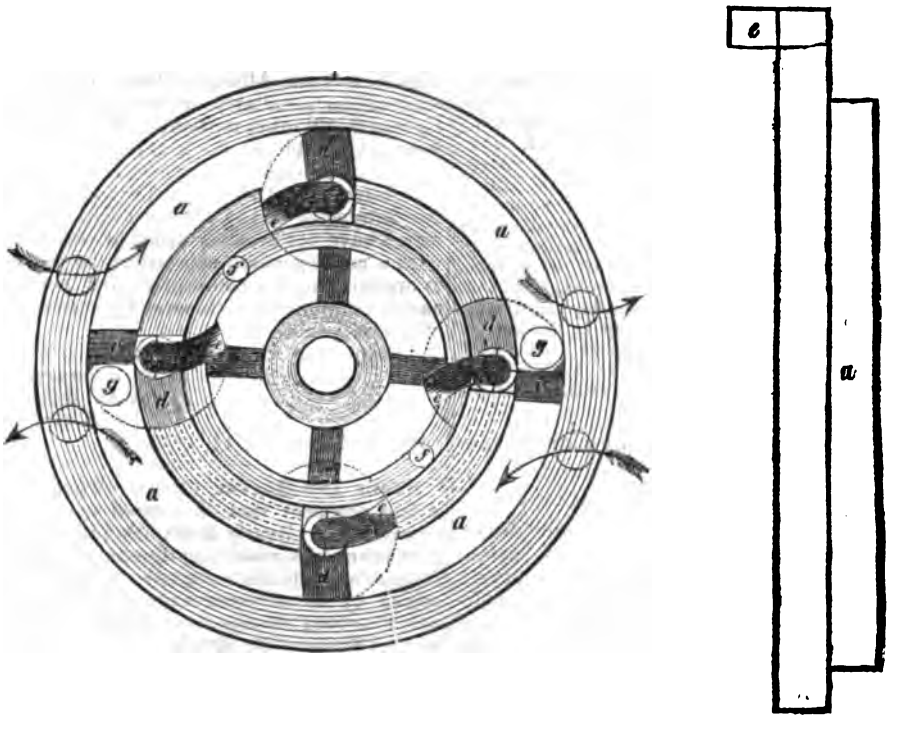
On Wednesday the steam carriages commenced running every hour, with passengers and luggage; and they have since been plying with the most triumphant success. The carriages start from George's square a little before the hour, and proceeding down Queen street, take up passengers at the foot of it, and starting from the head of Maxwell street they pass through Tradeston, where they again take up passengers. This generally occupies about twelve or fifteen minutes; and the seven miles to Paisley are then done in thirty or thirty-five minutes. A few minutes are thus left to take in a supply of water and fuel, with the complement of passengers, at Paisley; and at the succeeding hour the same carriage again returns to Glasgow.

We also noticed in our publication of Tuesday the *kindness* with which the road trustees, at the Glasgow end, has accommodated Mr. Russell's carriages at their own expense (or that of the public), with a sufficient quantity of new metal, to try their powers; but we have since discovered that this *kindly disposition* has been carried a little too far, and that having found the carriages more than competent to the task of ploughing through the stratum of broken stones, previously laid down, they employed a large number of men on the following day, to lay down another stratum of equal thickness on the top of the former, rendering the road scarcely passable to any heavy load. Finding this expedient also ineffectual, we learnt yesterday that horses and carts and a number of men had been engaged during the whole of the night in laying down loads of broken stones, to such a depth that they were obliged to cut away the bottom of the toll-gate in order to allow it to close over the mass.

The difficulties surmounted in bringing these vehicles to the perfection here indicated, and the qualifications of the inventor, are what scientific persons alone can duly appreciate; and we certainly cannot furnish our readers with a more striking estimate of both than by quoting the following observations from a very able paper on "the relation between a machine and its model," by Mr. Edward Sang, teacher of mathematics in Edinburgh, and which we find in the Mechanics' Magazine for January last:

"At the surface of Jupiter, a steamboat of 20 horses power would be unable to move—at the surface of our earth, one of perhaps 1000 horses power might perform pretty well; but at the surface of the moon, they might be made of perhaps 20,000 horses power—supposing the pressures of the atmospheres in the three cases to be alike. On Jupiter, a steam carriage would be an absolute chimera; *on the earth, it is barely possible*; but on the moon, nothing would be more usual. An intensity of gravitation, slightly greater than that which the earth exerts, would altogether preclude the hope of obtaining a locomotive engine. As it is, on flat railroads they perform well; as the road becomes inclined, they become less practicable; *and on common roads, nothing but the most consummate skill in the selection and in the use of the material, as well as in the contrivance of the parts, can ever be successful in their construction.* Security demands strength, strength requires weight, weight increases the friction, friction calls for additional power, and power can be procured only by an increase of weight. *To reconcile these conflicting claims is not the task for a beginner in mechanical contrivance, but for one well versed alike in the theory and in the practice of the arts.*"

NON-RECIPROCATING ROTARY ENGINE.



To the Editor of the Mechanics' Magazine:

SIR,—Be it known, that I, Ami Clark, of Berlin, in the county of Hartford, and State of Connecticut, have invented a steam engine, and that the following is a description thereof. *a a a a* is a circular cavity, formed principally by two concentric cylinders, of which the parallelogram *a*, fig. 2, is a sectional view; *c c* are standing blocks in the cavity, secured to the inner surface of the outer cylinder. Fig. 2, a side view of one of the four valves, marked *d d d d*, in fig. 1, which are secured to the outer surface of the inner cylinder, and form, when closed by the rollers *g g*, a part of the outer surface of the inner cylinder, as shown at the standing blocks, for the purpose of passing them with facility; *e e e e e*, figs. 1 and 2, the spanners, or keys, which, by coming in contact with the rollers, *f f*, will turn the valves, radiating from the centre, to receive the pressure which will propel them from the standing blocks, and cause them to run their circuit. Two of the valves are acted upon while two are passing the blocks, and thus twice the surface measure of a section of the cavity is acted upon continually while steam is applied.

As the steam is admitted on opposite sides at the same time, it will be seen that the pressure, however great, will not generate friction. This engine gives no motion but circular; the advantage in this respect over the reciprocating I need not mention. It is obvious to every mechanic, that in continually changing or reversing the motion of heavy bodies there is great loss of power. It will be necessary to have two valves to one block, that the pressure may not generate friction; the more standing blocks and valves there are, the less the weight of the engine in proportion to the power. The circular cavity ought to be small in diameter, and the cylinders which form it can be made with sufficient length to acquire the surface measure requisite. The blocks may be secured to the outer surface of the inner cylinder, and the valves to the inner surface of the outer cylinder, if preferred, which will cause the outer cylinder to revolve.

AMI CLARK.

[*From the Utica Observer.*]

SHIP AND STEAMBOAT NAVIGATION.

We have much pleasure in reporting of the Convention held on the 11th instant in this city, to take into consideration the truly grand internal improvement, of making a SHIP CANAL round the *Niagara Falls*, and from Oswego to the Hudson, that a large number of delegates from various sections on the route met at the City Hall, when the meeting was organized by calling C. J. Burckle to the chair, and appointing Joseph E. Hloomfield, Secretary, *pro tem.* On motion it was Resolved, that a committee of seven be appointed to select officers for the meeting, draft resolutions and prepare a memorial to the legislature. Adjourned to 3 P. M. when the committee reported the name of James G. King, (of the chamber of commerce New-York,) President; John Townsend, of Albany, A. B. Johnson, of Utica, G. A. M'Whorter, of Oswego, and Amos S. Fryon, of Lewiston, Vice Presidents; James E. Bloomfield, of Utica, and James H. Bell, of New-York, Secretaries.

The meeting was addressed by Messrs. Burckle, Stewart, Gen. Smith, (of Oswego,) J. H. Bell, and J. E. Bloomfield, presenting the great importance of immediate action on this subject, asking the general government to commence, *as a national work*, a *Ship Canal* for the eight miles required round the Niagara Falls, and that our State should execute the work of an enlarged canal for Steamboats thence from Oswego to Utica, and from there to the Hudson, calculated on the largest scale proportioned to the supply of water.

J. E Bloomfield read a memorial containing much valuable information, which was adopted with several spirited resolutions. A central State corresponding committee, consisting of Henry Seymour, J. E. Bloomfield, A. B. Johnson, C. P. Kirkland, Alvan Stewart, A. Munson, E. B. Sherman, R. B. Miller, and N. Devereux, were appointed to receive and answer communications, with full power to take steps to advance the project. In New York a corresponding committee, consisting of James G. King, Isaac Hone, John L. Graham, Abraham Varick, F. C. Cutting and James H. Bell, was appointed. In Albany, Erastus Corning, C. E. Dudley, and L. Benedict.—Schenectady, John I. Degraff, Alonzo C. Paige, I. Riggs. Oswego, C. J. Burckle, G. A. M'Whorter and Henry Fitzburgh; with other committees on the route and adjacent counties.

We have great pleasure in presenting to our readers the above detailed account of the Canal Convention at Utica, as well as the following spirited resolutions, passed unanimously.

Resolved, That experience teaches us that the Erie Canal must, at some future period, (which period is near at hand,) become inadequate to transport all the products that will be furnished even by our own State, without reference to other sections of country that will naturally desire a market in the city of New-York; and that an enlightened forecast should induce our Legislature to adopt the proposed improvement, before it shall become indispensable, as the State will gain by this anticipation a new and enlarged commerce, that will otherwise be driven to seek a foreign market.

Resolved, That the great efforts of the Canadian government, to improve the navigation of the St. Lawrence, and, by means of the Welland canal, to furnish an uninterrupted ship navigation from the great lakes to the Ocean, and the equally great efforts of some of our sister states to divert from New-York the carrying trade and products of the west, admonish us to lose no time in counteracting these formidable, but noble rivalries.

Resolved, That a counteraction can be effectually accomplished by providing a navigable communication from the great western lakes to the Hudson, for vessels of a construction adapted to the navigation of the lakes.

Resolved, That this great improvement can be accomplished by constructing slack water and canal navigation from Lake Ontario, through and along the Oswego river, the Oneida Lake, Wood Creek, and the Mohawk, to the Hudson.

Resolved, That the natural facilities for the undertaking are so great, that it may be completed at an almost trifling expense in comparison with the great objects in view.

Resolved, That in the construction of this great improvement, vessels from Lake Erie may reach a market some weeks earlier in the spring, than through the Erie canal; and by means of the magnitude of such vessels, the expense of freight will at all times be less than by canal boats. These two advantages over the present mode of transportation will essentially counteract the difficulties that will otherwise induce shipments to Montreal, Quebec, and other markets—especially as the railroad from Utica may, if the state shall please, be used to complete the intercourse with the Hudson at seasons of the year when the Erie canal shall be closed.

Resolved, That in connexion with these improvements, the above navigation for lake vessels may, with but little additional expense, be extended to the Salt Springs at Salina, to Ithaca, at the south-western extremity of Cayuga Lake, and to Seneca Lake.

Resolved, That a memorial be presented to the next legislature on the subject of these resolutions, praying that an examination and survey be made of the proposed improvement, to embrace its practicability, importance, and probable cost.

Resolved, That the Central Executive Committee appointed at this meeting give efficacy to the foregoing resolutions by corresponding with New-York, Albany, Oswego, Geneva, and other places peculiarly interested, and pursue vigorously all other measures which they shall deem serviceable to the great enterprise contemplated by this meeting.

Resolved, That the several towns and counties interested in the proposed improvements, which have not been furnished by this meeting with a corresponding committee, be requested to organize such a committee, and notify the names thereof to the General Executive Committee at Utica.

The meeting was then adjourned sine die.

J. E. BLOOMFIELD,
JAMES H. BELL,
Secretaries.

Utica, September 11, 1834.

SANDY AND BEAVER CANAL.—There is now a fair prospect that this canal will soon be commenced. Nearly $200,000 of the stock has now been subscribed, and the charter is a very favorable one to the company: it will be perceived by an advertisement in this paper that our Pittsburg friends have taken up the project.—[Steubenville Herald.]

Miami Canal.—The locks, eleven in number, which connect the main canal with the Ohio River, are now completed.

SAFETY OF LEAD PIPES PROTECTED BY TIN.—Extract of a letter from Mr. G. Chilton, dated New-York, June 23, 1834.

Dear Sir,—Observing, in a late number, a notice of Ewbank's *patent* tinned lead pipes, and having had many applications for information concerning the danger attending the use of metal pipes for conveying water, beer, cider, &c., I have been induced to subject the pipes of Ewbank to a few trials, for the purpose of ascertaining whether, from the occasional contact of acids, any deleterious solution of lead would attend their ordinary use. It is well known, that the common beer pump, with a leaden pipe, has frequently given to the liquor a dangerous impregnation, especially after remaining stagnant for a time, and the beer in a sour state. The substitution of block tin would remove the apprehension of danger, but its greater price offers a strong temptation to the use of lead. It appears to me that the lead tube lined with tin will answer the ends of cheapness, safety, and durability. I would therefore invite your attention to the following experiments, which, if you think them of any importance to the public, you may insert in your Journal.

Experiments.—Various portions of lead tube, coated, some with pure tin, and others with different alloys of tin and lead, were bent into the form of a semi-circle, and filled with vinegar of different degrees of strength. After standing, some a month, and others six weeks, with occasional disturbance, the clear solutions were tested, first with sulphate of soda, and afterwards with bi-hydro-sulphuret of ammonia. The application of the first of these tests, namely sal. soda, produced no alteration in any of the solutions, from which it must be inferred that they contained no lead.

The application of the second test produced, as was anticipated, a brown precipitate of sulphuret of tin. In the same manner, two fresh pieces of tube were filled with a strong solution of common salt, which remained in contact for some time. The solutions, when assayed with the same tests, showed that nothing but a little tin was dissolved.

It appears that in all these cases, which I regard as galvanic effects, the tin was the most oxidable metal, although, when not under the influence of polar arrangement and in the open air, lead appears to oxidate sooner than tin. It is scarcely necessary to remind you that results similar to these were obtained thirty years ago by the celebrated Professor Proust, at Madrid, who undertook for the Spanish government an extensive series of experiments on the different alloys of lead and tin, with the express view of determining whether the popular prejudices against the coating of copper vessels with an alloy of tin and lead, which is the common practice, was ill or well founded. Nothing can be more satisfactory than the conclusions he drew from his labors, namely, that as, in all his numerous experiments, neither lead nor copper were dissolved, there is little reason to fear the solution of lead from the tinning of our kitchen utensils. I may just mention here, that I am in the habit of cleaning out my soda fountain every spring with dilute muriatic acid, which uniformly dissolves the oxide of tin without touching the copper, which I am persuaded will remain as securely as the sheathing copper in Sir Humphry Davy's great experiment, and for the same reason.—[American Journal of Science and Arts.]

Mechanics—The Actions and Postures of Animals, and particularly of Man, illustrate beautifully the observations with respect to the centre of gravity.

A body, we have seen, is tottering in proportion as it has great altitude and narrow base—but it is the noble prerogative of man to be able to support his towering figure with great firmness, on a very narrow base, and under constant change of attitude. This faculty is acquired slowly because of the difficulty. A child does well who walks at the end of ten or twelve months; while the young of quadrupeds, which have a broad supporting base, are able to stand and even to move about almost immediately.

The supporting base of a man is the space occupied by and included between the feet. The advantage of turning out the toes is, that without taking much from the length of the base, it adds considerably to the breadth.

If there be much art in walking on two

perfect feet, there is still more in walking on two slender legs, with rounded extremities; which, however, we often see done, by mutilated soldiers and sailors.

All the ladies of the empire of China have to acquire nearly the same talent as these victims of war; for barbarous custom has crippled them, by confining their feet for life in the shoes which fitted them in infancy.

But surpassing in difficulty any of these instances is the practice, which is general among the inhabitants of the sandy plains called the *Landes*, in the south-west of France, of walking on stilts. The *Landes* afford tolerable pasture for sheep; but during one portion of the year they are half covered with water, and during the remainder they are still very unfit walking-ground, by reason of their deep loose sand and thick furze. The natives meet the inconveniences of all seasons by doubling the length of their natural legs, through the addition to them of the stilts mentioned, which they call *des echasses*. Mounted on these, which are wooden poles, put on and off as regularly as the other parts of dress, they appear to strangers a new and extraordinary race of long-legged beings, marching readily over the loose sand, or through the water, with steps of eight or ten feet in length, and with speed equalling that of a trotting horse: their moderate journeys being of thirty or forty miles in a day. While watching their flocks, they fix themselves in convenient stations, by means of a long staff supporting them behind, and with their rough sheep-skin cloaks and caps, which cover them above, like thatched roofs, they appear like little watch-towers, or singular lofty tripods, scattered over the face of the country.

Still beyond the art of walking on stilts is that which some persons attain of walking and dancing on a single rope or wire; or even of keeping the centre of gravity above the base, while standing on the moveable support of a galloping horse. A rope-dancer usually carries a long pole in his hand, to balance him: it is loaded at each end, and when he inclines, he throws it a little towards the side required, that the reaction may restore his body to perpendicularity.

Much art of the same sort is shown in the attitudes and evolutions of the skater; in the amusements of supporting a stick upright on the end of the finger; and in many other feats of a like kind.

Attitudes generally depend on the necessity of keeping the centre of gravity of the body over the base under variety of circumstances, as in—the straight or upright port of a man who carries a load on his head—the leaning forward of one who carries it on his back—the hanging backwards of one who bears it between his arms—the leaning to one side of him who is carrying a weight on the other side—the habitual carriage of very fat people, whose head and shoulders are thrown back, giving a certain air of self-satisfaction,—an air which belongs also to the state of pregnancy, and even to that of the dropsical patient, although producing in it so sad an incongruity.

When a man walks or runs, he inclines forward, that the centre of gravity may overhang the base; and he must then be constantly advancing his feet to prevent his falling. He makes his body incline just enough to produce the velocity which he desires.

A man, in pulling horizontally at a load, is merely causing his body to overhang its base, so that its tendency to fall may become a force or power applicable to the work.

When a man rises from a chair, he is seen first bending the body forward, so as to bring the centre of gravity over the feet or base, and then he lifts the body up. If he lift too soon, that is, before the body be sufficiently advanced, he falls back again.

A man standing with his heels close to a perpendicular wall, cannot, without himself falling forward, bend sufficiently to pick up any object that lies before him on the ground; because the wall prevents him from throwing part of his body backward, to counterbalance the head and arms, that must project forward. A man, little versed in such matters, agreed to give ten guineas for permission to try to possess himself of a purse of twenty, thus laid before him: he of course lost his money.

When a man walks at a moderate rate, his centre of gravity comes alternately over the right and over the left foot. This is the reason why the body advances in a waving line, and why persons walking arm in arm shake each other, unless they make the movements of their feet to correspond, as soldiers do in marching.

Sea sickness is a subject closely related to the present. Man requiring, as now explained, so strictly to maintain his perpendicularity, that is, to keep the centre of gravity always over the supporting part of his body, ascertains the required position in various ways, but chiefly by the observed perpendicularity, or other known position of things about him. Vertigo and sickness are the consequences of depriving him of his standards of comparison or of disturbing them.

Hence, on shipboard, where the lines of the masts, windows, furniture, &c. are constantly changing, sickness, vertigo, and other affections of the same class, are common to persons unaccustomed to ships. Many persons experience similar effects in carriages, and in swings; or on looking from a lofty precipice, where known objects being distant, and viewed under a new aspect, are not so readily recognized; also in walking on a wall or roof; in looking directly up to a roof, or to the stars in the zenith, because then all standards disappear; on entering a round room, where there are no perpendicular lines of light and shade, as when the walls and roof are covered with a paper which has no regular arrangement of spot; on turning round as in waltzing, or if placed on a wheel; because the eye is not then allowed to rest long enough on any standard, &c.

People when in the dark, and therefore blind people always, use standards belonging to the sense of touch; and it is because, on board of ships, the standards both of sight and of touch are lost, that the effect on persons is so very remarkable.

But sea sickness also partly depends on the irregular pressure of the bowels among themselves and against the containing parts, when the influence of their inertia and weight varies with the rising and falling of the ship.

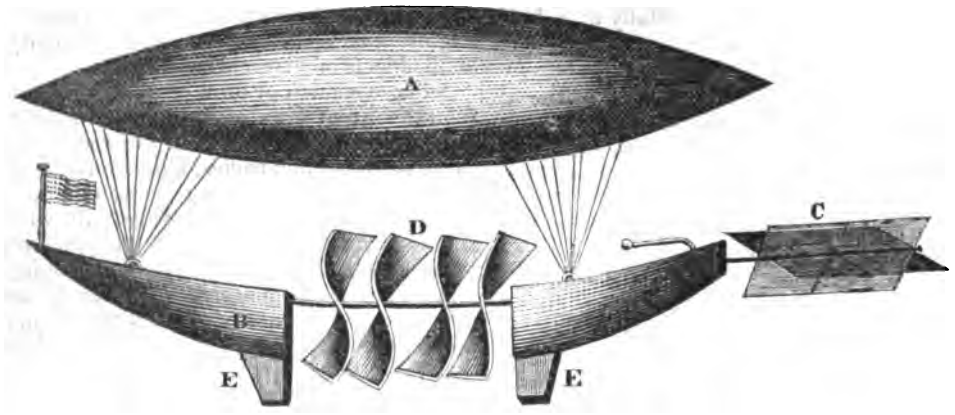
From the nature of sea sickness, as discovered in these facts, it is seen why persons unaccustomed to the motion of a ship often find relief by keeping their eyes directed to the fixed shore, where it is visible; or by lying down on their backs and shutting their eyes; or by taking such a dose of exhilarating drink as shall diminish their sensibility to all objects of external sense.

As no condition or form of matter escapes from the great laws of nature, we find the attitudes and general condition of vegetable, as well as of animal bodies, characterized by the necessity of having the centre of gravity supported over the base. Thus, with what admiration do we contemplate the pine and other trees in the forests of nature, springing up to heaven as perpendicularly as if the plummet had been at work to direct them; and on the brows of precipitous hills no less than in the level plains! On a smaller scale, we see the grasses and corn-stalks of our cultivated fields illustrating the same truth. And whenever, in tree or shrub, accident or peculiar nature causes a deviation from the laws of perpendicularity, additional strength and support are provided.—[Dr. Arnott.]

Flies.—It is well known that flies will deposite their eggs on any surface which affords a suitable nidus for them. I remember a gentleman's son who suffered severely from the larvæ (maggots) of a fly, which proceeded from eggs that had been laid in the ear; but the most extraordinary case of this sort which has come to my knowledge occurred in a negro man at Kellitt's estate, in Jamaica. He was a tradesman, and a very intelligent fellow. When I first saw him, his nose and his cheeks were very much swollen, rendering his face hideous; and he suffered much severe pain, I immediately suspected the cause, and soon succeeded in making the residence of the maggots so uncomfortable to them, by application of turpentine and olive oil, with green tobacco juice, up the nostrils, that they came away gradually; but it occupied at least a fortnight before the whole were removed, so deeply lodged were they in the usual passages. I desired a man to keep a tally of the numbers of his tormentors; and he did so, I have no doubt, faithfully; after which he handed it to me, and it is still in my possession. It contains 23 crosses (X) for ten each, and V for five, amounting to 235 larvæ of, I believe, the bluebottle fly. Almost all of them were full grown, and forming, perhaps, such a brood of maggots as never proceeded from any man's head before. Flies abound upon sugar estates; and, when we recollect how often negroes go to sleep in the open air, the wonder is that similar incidents do not occur more frequently. —[Magazine of Natural History.]

How to make a bowl of Punch.—On the 26th Oct. 1694, a bowl of punch was made at the Right Hon. Edward Russel's house, when he was Captain General and Commander-in-Chief of his Majesty's forces in the Mediterranean.

It was made in a fountain in the garden, in the middle of four walks, all covered over head with lemon and orange trees; and in every walk was a table, the whole length of it covered with cold collations, &c. In the said fountain were the following ingredients, viz: four hogsheads of brandy, eight hogsheads of water, twenty-five thousand lemons, twenty gallons of lime juice, thirteen hundred weight of fine Lisbon sugar, five pounds of grated nutmegs, three hundred toasted biscuits, and lastly a pipe of dry mountain malaga. Over the fountain was a large canopy to keep off the rain, and there was built on purpose a little boat, wherein was a boy, belonging to the fleet, who rowed round the fountain and filled the cups of the company, and in all probability more than six thousand men drank thereof.



Æronautic Steam Car.

To the Editor of the Mechanics' Magazine:

Sir,—Herewith I send you a proposed plan for an Æronautic Steam Car, which, if you deem worthy of your attention, you may record in your Register of Inventions and Improvements. Of the expediency of the project, your readers and yourself must be the judges. For my own part I should not have thrust it upon your attention had I the slightest thought of its inexpediency. I am of the opinion that, if properly constructed, it will succeed beyond a doubt in calm weather. Of the effect that would be produced, should Æolus unpack his chariot during one of its ærial flights, I am unable to speak; but I presume the tempest-tossed voyager would be able to conduct his frail bark with as much skill certainly as our modern æronauts, who are limited in their operations to a discharge of gas and ballast. The plan herein proposed occurred to me some years since, but I have not availed myself of the advantages that arise from an actual experiment, because of the expense which must necessarily be incurred in the construction of such a machine.

The sketch represents a side view of the car. A is a balloon; B, the car attached thereto; C, a helm to govern its course; D, spiral vanes; E, supports for the car when at rest. Let two balloons, of the form represented in the drawing, be made of silk, prepared in the usual manner, both of the same size. A silk netting is thrown over each one, but is collected into a few cords at a short distance from each extremity of the balloon. The balloons being placed horizontally and parallel with each other, a car is suspended a few feet below, in the manner represented in the sketch, being attached at four points. The car may be made of any desirable form, of some material combining in an eminent degree strength and lightness. A light frame of wicker-work covered with oiled silk might answer the purpose. The car contains,

1. A simple apparatus for generating hydrogen gas, suitably connected with the balloons by pipes. Valves are also provided for the intromission and eduction of the gas at the disposal of the æronaut. If it is required to ascend, a greater quantity of gas is introduced, the balloons being constructed so as to admit of it. A contrary process causes a descent. The usual way of effecting a rise by throwing out ballast is therefore wholly avoided, and the car is not encumbered by unnecessary baggage.

2. A small steam engine of the simplest construction, with gearing to move the silken vanes or wings, of a spiral form, which are placed on both sides of the car. The boiler may be heated by the combustion of water in combination with bituminous or oleaginous substances, on the principle of "Morey's American Water-Burner."

3. A helm of silk stretched on rods placed in the stern, to govern the motions of the whole. This may be made after the manner represented in the drawing, where two fans are joined together at right angles with each other, (its action on the air will readily be perceived,) or by two distinct fans, placed so as to act vertically or laterally.

4. A barometer, thermometer, compass, and the whole et cetera necessary for an aerial voyage.

Let us now suppose the balloons to be inflated, and the whole with one person buoyant in the air, the balloons being of sufficient capacity to sustain the whole. Gas is now introduced till it rises. When a sufficient height is attained let the silken vanes be caused to revolve with rapidity. *A rapid progressive motion* is the result. Should any of your readers think differently, or should they discover any difficulty, theoretical or practical, they will please make it known through your columns, that I may avail myself of the same medium (with your permission) to correct, acknowledge, or explain, as the case may be, as I hold myself in readiness to answer all queries respecting the above, if possible; and I am equally ready to confess my error, if it shall be clearly shown. Its practicability rests upon the truth of two points: 1. Can balloons be constructed of sufficient buoyancy to support a car containing the above described apparatus? 2. If supported, will a progressive motion be caused by the action of the spiral vanes on the air? When we reflect that balloons have been made capable of raising four persons, and that the apparatus cannot exceed the weight of two persons, the truth of the first of these propositions becomes sufficiently apparent. That the air is a sufficient abutment to cause progressive motion, if acted upon properly, is exemplified in the flight of birds, where muscular action is exerted to acquire and maintain a height, as well as to move forwards. The words of poetry as quoted in your last will be strictly verified:

> "Soon shall thy arm, unconquered steam! afar
> Drag the slow barge, or drive the rapid car;
> Or, on wide moving wings, expanded, bear
> The flying chariots through the fields of air."

In conclusion, Mr. Editor, I would beg you to overlook the many errors that must occur in this article. "I am no orator, as Brutus is," and am equally unskilled in "chaining winged thoughts to the parchment." At some future time I purpose to furnish you with drawings of a newly invented Portable Horse Power which I possess. I have other objects in view besides a desire to contribute to the advancement of mechanic arts. I consider that yours is indeed a "Register of Inventions and Improvements," and, therefore, a person unable to avail himself of the usual protection by patent may in a great measure secure to himself the *credit*, at least, of his invention by publication. The world may then judge of the originality of a project, and a fair copy be present for the *accommodation* of those who would avail themselves of the *advantages* of *re-invention*.

Respectfully, yours,

B. G. N.

Dexter, Mich. Ter., August, 1834.

Apparatus for extracting Caloric by Compression for heating Rooms.

To the Editor of the Mechanics' Magazine:

Sir,—It appears to me most probable that some plan has heretofore been adopted, or proposed, for extracting caloric by compression for heating rooms, &c. I can only say that I have no knowledge of any instance of the kind, nor have I made any experiments on the subject, except on a very small scale, which however have been very satisfactory. I intend, soon as convenient, to construct an apparatus of the following description:

A cylinder six feet long and six inches in diameter, with a permanent partition or cylinder-head in the middle, dividing the interior into two equal parts. In each part of the cylinder is a piston with packing and piston rod, with cross-head and guides, as is usual in steam engines. The two cross-heads are connected with each other by two rods, which extend from the two ends of one cross-head to those of the other, and of such a length that when one piston approaches the centre-head, the other recedes to the opposite end of the cylinder. On one side of the cylinder, and near the centre-head, is a branch, and within the branch a puppet valve, which admits the induction of air, but prevents its escape. On the other side, opposite the first, is a second branch and valve, which permits the air to escape from the first section of the cylinder, but prevents its return. These valves are drawn to their respective seats by spiral springs. Near the second branch, but communicating with the other section of the cylinder, is a third branch, with a cock-valve. From the head of this valve a crank or lever projects horizontally about three inches towards the cylinder. To the end of this lever is attached, by a revit or moveable joint, a rod, which extends to the end of the cylinder, having a hook or catch near the end, which takes to the second cross-head, whenever the second piston is brought forward to the centre-head; and is thereby, when the piston recedes, carried about three inches, thus opening the valve, and is then detached from the cross-head by means of an inclined projection on the lower side of the rod coming in contact with a pin, which for this purpose projects from the end of the cylinder, and the valve is then instantly closed by a spring. Opposite the third branch is a fourth, with cock-valve, lever, and rod; this rod also extends to the end of the cylinder, and the end being bent backward comes within; so that when the second piston approaches the end of the cylinder, it comes in contact with the bent end of the rod, moves it two or three inches, and thus opens the valve: the rod is again brought back to its first position, thus closing the valve by the approach of the cross-head.

To the first branch is attached a pipe, which conducts air to the first section of the cylinder from without: to the second is attached a pipe, which receives the compressed air from the cylinder. This pipe communicates with another, being connected by a flanch or other joint, and having a valve near the joint, which admits the compressed air to the second pipe, but prevents its return. In the same manner the second pipe communicates with a third, and that with a fourth, the order thus extending through any number of pipes, of any convenient dimensions, and any variety of positions, with joints and valves. These are called heating pipes, the last of which communicates with the second section of the cylinder by the third branch. Another pipe is attached to the fourth branch, which conducts the liberated air out of the room.

These pistons are put in motion by wind, water, or other power, the third valve being kept closed, and the fourth being kept open, (which may be done by raising the two rods connected with these valves a little out of their usual positions,) till the air within the heating pipes becomes compressed equal to about twelve atmospheres, when the two rods, being returned to their places, are put in operation. By this arrangement it will be understood that the pistons, being connected, and the expansive force of a portion of the compressed air being applied to the piston, it contributes much, if not most, of the power required for compressing it. Note—In the foregoing description, the cylinder is supposed to be fixed in a horizontal position, but may be either horizontal or vertical, as may be most convenient.

I have not yet had opportunity of ascertaining by experiment what quantity of heat may be thus obtained; but I think I may safely calculate, that about three-fourths of the caloric contained in the air thus compressed will be evolved during its progress through the heating pipes; and that the atmosphere contains at least one hundred degrees of caloric when at the temperature of zero! therefore, if the piston makes one hundred vibrations per minute, and compresses at each one cubic foot of air, it follows that the temperature of the air contained in a room ten feet square may be raised seventy-five degrees in ten minutes; or twenty-four rooms may be kept comfortably warm in the coldest weather. The liberated air must not be permitted to escape within the room, as it will be intensely cold, and might be employed to advantage in the preparation of ices, or in cooling apartments in warm weather. Yours, very respectfully,

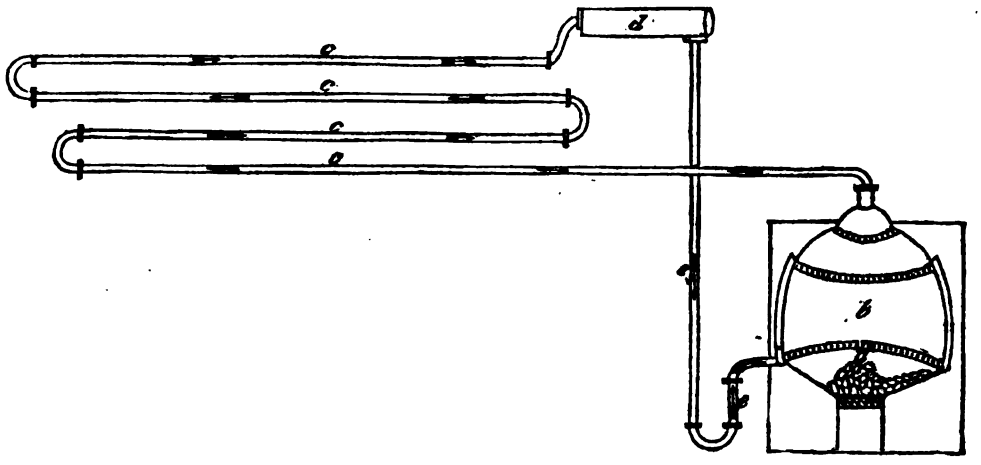
RUFUS PORTER.

Billerica, Mass., Aug. 16, 1834.

Notice of a Hot-Water Apparatus, invented by Mr. John Darkin, Engineer, Norwich.

Having observed a paragraph respecting this apparatus in a Norwich newspaper, we wrote to Mr. Darkin, who, with commendable liberality and promptitude, sent us the annexed letter and sketch. The system adopted appears to be similar to that of Mr. Perkins, but at a temperature not exceeding that of boiling water.

"In reply to your inquiry, I cannot tell whether my hot water apparatus differs from all others in use or not, never having seen a single design of the kind until after I had constructed my own; and since that time I have only read the accounts of those which are described in the Gardener's Magazine. I have derived much amusement from these, from observing that other attempts have been attended with similar difficulties to those which I had to encounter, before I could get this apparatus to act to my wishes. I have great pleasure in sending you a description of it, in order that you may judge of its merits; and if you think it likely to afford additional hints, and to be deserving of a place in either the Gardener's Magazine, or in the Architectural Magazine, it is very much at your service.



"The apparatus consists of a furnace, a boiler, cast-iron tubes of any diameter, an expansion tube, &c. as shown in the accompanying sketch. The tubes may be connected with the boiler, in any way which circumstances require, and carried in any direction, so that they do not descend below the level of the bottom of the boiler. It being understood that a given number of superficial feet of tube will throw off a certain quantity of cubic feet of hot air per minute, it can easily be ascertained by the admeasurement of the house, and the quantity of glass in it, what quantity of tubing is required for it.

"I need not enlarge upon the efficiency and economy of my own plan of warming, as you will be a competent judge of its qualities by my description of it. It certainly has a decided superiority, in every respect, over the common mode of heating by flues, and particularly in retaining *the required temperature* with a small consumption of fuel, and very trifling attention. Boiling water is much to be preferred to steam heat. My own green-house, in which the apparatus is constructed, loses but a few degrees of heat by allowing the fire to go out for six or eight hours in the night. A short time is sufficient to make the water boil again, when it expands and displaces the cold water in the tubes, which are immediately supplied with hot water from the boiler, the cold water retiring through the expansion tube down the returning tube, whence it is heated and again projected forward; thus keeping up a continued circulation of hot water through the tubes for a considerable time, even after the fire has been allowed to die out.

"This apparatus can be applied with the best effect to horticultural and public buildings of every description, mansions, offices, warehouses, drying rooms, &c. &c.; and, as the tubes have no connection with the fire, not a particle of burned air is communicated by them to the room in which they act."—[Loudon's Magazine.]

AGRICULTURE, &c.

WHEAT.—Extract of a letter from Maine to the Secretary of the H. F. & H. Agricultural Society:

"My winter wheat is sown between the 1st and 7th of September, (but in the Connecticut Valley may be sown as late as the middle of September.) With the wheat I sow 1½ bushels of oats to the acre—the oats will be a protection to the wheat during the winter and a manure in the spring—sometimes I sow one to two hhds. lime to the acre, and one bushel of plaster of Paris the spring following.

"Last year I made the experiment in my garden of sowing some winter wheat in the spring and cutting it frequently until 1st September, my usual time of sowing wheat; it has succeeded so well that I intend next spring to sow an acre with winter wheat and feed with calves, say 3 yearlings, or animals that will not tread too hard or feed too close until September.

"The advantage looked for is that it will stand the winter better, and be fit to reap earlier than if sown in autumn.

"Have you any of th Black Sea wheat? The heads are large and will be fit to reap some days earlier than our common wheat, and out of the way of rust. Can send you ½ bushel. Have you any of the Skinless Oats? If not, can send you one bushel."—[Hampshire Gazette.]

PITTING TURNIPS.—As the turnip harvest is approaching, we take the liberty of suggesting to those who cultivate the Swedes, our method of pitting them for winter. These pits are limited to two feet in width, and of an indefinite length, and are dug in a dry situation, seldom more than two feet deep. When the pit or hole is filled with roots as high as the surface of the ground, the turnips are laid by hand, the tops out, and sloping to the centre, until they terminate in a ridge which is generally about two feet above the gound. The whole are then covered with straw and then with earth. The important point follows: The crown of the ridge is then pierced with an iron bar at intervals of a yard, and the earth passed out, so as to leave an entire aperture into the turnips, and into each of these apertures a wisp of twisted straw is loosely inserted. The roots will heat, and unless the rarefied air is permitted to escape, the turnips are apt to rot. The openings permit its escape, without danger of the frost doing injury. With this precaution we have not lost one bushel in a thousand. The same course would

no doubt be beneficial in preserving the *Mangel Wurtzel.*

LARGE CROPS OF RYE.—The Editor of the New-England Farmer, after collecting much testimony in favor of early sowing, concludes with the following:

Ephraim Wood, Esq. of Camden, Me. sowed 5 bushels and 3 pecks of rye in September, 1822, on about 5 acres of ground newly cleared of the wood, which produced 240 bushels—over 40 bushels to the bushel sown, and about 48 to the acre. Its being sown early and in good ground occasioned a large number of shoots to spring from one root. In the year 1827, according to the Hampshire Gazette, Linus and Dorus Graves, of Hadley, Mass. had 40 acres of rye in one field, which was so stout and thick that the reaping of one fourth of an acre was considered a day's work. It was estimated that the average product would be about 35 bushels to the acre. The Newburyport Herald stated that Capt. John Sanborn, of East-Kingston, Rockingham county, N. H. raised, in 1830, 357 bushels of winter rye from 7 bushels sown, on 9½ acres of ground; being 51 bushels to the bushel sown, and about 37½ bushels per acre. Mr. Richard Adams, jr. received a premium of $20 from the Massachusetts Agricultural Society, for having raised, in 1830, 38 bushels and 3 pecks of rye from an acre. Mr. Adams Knight, of Newbury, Mass. received a premium of $20 from the Massachusetts Agricultural Society for having raised, in 1832, 45⅝ bushels of rye on an acre of ground. This rye was sown in August. Mr. Gideon Foster, of Charlestown, Mass. obtained, in 1832, 38 bushels and 2 quarts of winter rye to the acre. Mr. Tristram Little, of Newbury, Mass. raised, in 1832, 45 bushels and 20 quarts to the acre. Mr. N. Smith, of Roxbury, Mass. raised, in 1833, 72½ bushels of rye on 1 acre and 264 rods. Mr. John Keely, of Haverhill, Mass. in 1832, raised from 1 acre and 13 rods, 46 bushels and 3 pecks. Mr. Richard Jaques, of Newbury, Mass. in 1833, raised 35¾ bushels on an acre.

DRY YEAST.—The usual method of making good yeast, with strong hop water and flour, is in the first place followed. When this is thoroughly fermented, it is mixed with Indian meal until thick enough to roll out and cut into cakes. It is then exposed to the sun, and while drying undergoes a fermentation in the cakes. When perfectly dried, it is kept for use in a bag, hung up in a dry place. It ferments dough extremely well. A small piece, say 1½ inches square, is sufficient for six pounds of flour. Yeast thus prepared is good for two or three months, but gradually loses its virtue; the fermentation becoming tame as it grows old, and of course less favorable to the quantity of the bread. But there is no trouble in renewing it at any time from the dry cakes. I have myself tried the experiment with entire success, and renewed my yeast from cakes six months old. A method of making dry yeast very similar to this, has been practised by some distillers,—and is also in use in different parts of New-England, and called Turnpike yeast. W.—[New-England Farmer.]

THE FOREST PRUNER'S GOLDEN RULES.—No branches to be cut off which do not interfere with the leader; no wound, thus or otherwise made, to be larger than an inch in diameter; and no pruning in autumn.—[Gardener's Magazine.]

(From the forthcoming number of the Mechanics' Magazine, and Register of Inventions and Improvements.)

STATE PRISON LABOR.

In "AMERICA," the asylum of the oppressed of all countries, the nation that has dared to declare itself "free and independent" of the whole world, where equal rights are advocated, and those who gain an honest livelihood by their industry are as much respected as the man of the greatest wealth, it is a most extraordinary fact, that the system of our criminal jurisprudence has been for many years, and *still is*, calculated, to make many an honest and well-meaning mechanic feel shame and disgust in consequence of the society with which he has been unconsciously brought into competition and association—associated with felons! with men who have committed some of the greatest outrages on society, and who have been nominally *punished*, but who, in fact, derive more advantage to *themselves* from that nominal punishment, than they ever gained before in the same space of time. They are taught trades of various descriptions, they are well fed,—and many cases are known where the criminal has entered the prison in a weak and debilitated state, and left it, in consequence of the excellent medical aid there afforded, in good health, and apparently possessing a robust constitution, only to mingle with our mechanics; and many instances could be stated where they have been placed in a situation to be the guide and overseer of the apprentices, and even of the children of mechanics.

It is high time that such a state of things should cease to exist, and a system adopted which shall protect honest industry from a competition with the labor of felons, whether carried on for the benefit of the State, or individual contractors; and we feel confident that it is only necessary for the mechanics, in every section of the Union, to second the exertions of the Utica Convention, and it will be done, and that speedily. We have official documents that will make it clear that the present system of *punishment* has not that salutary effect upon those who have been convicted which many have supposed; and can state several instances where men have been inmates of the same or other prisons, three, four, and five times; this we shall do in this, our present number of the Mechanics' Magazine, a work which, although only known comparatively to a few, has been patronized far beyond any work of a similar nature ever issued from the press in this country, and which will ever be found advocating the interests of the *working men*, and its columns always open for their communications on any subject (*except politics*). We shall be gratified to be made the medium of communication between mechanics in different parts of the Union, and pledge them that we are devoted to their best interests; and shall do all that men with our limited means can do, to disseminate such information as will elevate the character, and improve the condition, of the mechanics of the United States; and to one measure especially do we stand pledged—never to abandon the cause *until we see the present odious State Prison Monopoly* done away, and the mechanics admitted to a full participation, in proportion to their numbers and intelligence, of the duties, stations, honors, and emoluments, of the country.

It has been well remarked by the eloquent and learned BURKE, that "no government ought to own that it exists for the purpose of checking the prosperity of its people, or that *there is such a principle involved in its policy.*" That such a principle does exist in this and other States, by allowing convicts to be employed in the various branches of mechanic arts, will, we think, be readily admitted—a system calculated in every way to deteriorate and oppress the most numerous and useful of our citizens, the artizans—to injure the industrious tradesman—to promote and encourage immorality—and to throw the great mass of our trade into the hands of large capitalists, who have the means of employing an unlimited number of hands, and are thus enabled to undersell the fair industrious man who is toiling only for a living.

"We the people" profess to govern ourselves, by deputing those to be our representatives who we believe will act in accordance with our wishes on subjects of vital importance to the community, and therefore it has been chiefly owing to our supineness on this question, that this odious system has not long since been abolished. The recent proceedings at the Utica Convention, inserted in this number, at page 133, will show that the great mass of the working-men, and the friends of working-men, are aroused on the subject. They have suffered by its continuance, in a pecuniary view, which, together with the disgraceful associations into which they have unknowingly been introduced, by working with discharged criminals, has determined them to use all lawful means to put an end to a practice which is a disgrace to our country. If the practice of teaching the convicts some means of obtaining useful employment had the desired effect of reforming them, there might be some excuse for the continuance of such a practice; but we know the contrary is the case. In a conversation, a few days since, with the Hon. Richard Riker, the Recorder of New-York, before whom many of these men have been tried, he stated that not more than two out of every hundred that had been tried before him, and imprisoned, had returned to honest pursuits; and on referring to Mr. Humphrey's report, made to the Legislature in March, 1834, we find he has stated to the Committee that fact. We cannot do better than insert his letter—it is as follows:

"New-York, 27th March, 1834.

"GENTLEMEN—It is not in my power to reply to your several questions at as early a period as you could have wished. A press of official duties prevents it. I answer a part of them.

"To your first question, to wit: 'What portion of offenders sentenced to the penitentiary or to the state prison, as far as your experience enables you to say, reform?'

"Answer.—I regret to say, very few. My opinion is, as far as my experience enables me to give an opinion, that there are not more than *two* out of *an hundred* of well attested instances of durable reform.

"To your second question, to wit: 'What portion of offenders sentenced to the penitentiary or to the state prison, are again tried for a second offence?'

"Answer.—This question cannot, without much examination, be answered with accuracy. I can at present only say, that at every court of the general and special sessions held in our city, with few exceptions, several old offenders, who have been before sent to our penitentiary or state prison, or to the state prison of some other State, are again tried and convicted.

"To your third question, to wit: 'Can the present penitentiary and state prison system be improved?'

"Answer.—It can. On this subject there is no doubt; the manner and details may be given so as to convince every judicious man.

"To your further question, to wit: 'Can the penitentiary and state prison system be so improved as to protect the virtuous and industrious mechanic and artizan against its influence and monopoly; and, above all, against bringing felons in competition with good, dutiful, and upright citizens?'

"Answer. This question is perhaps one which ought to be addressed to the Legislature rather than to judges. My opinion is, that means can be adopted to mitigate the evil, and that means ought to be adopted to *remove* the evil altogether. The virtuous citizen should not, in any event, be reduced to the necessity of competing with a criminal. The law must be unjust that leads to such results.

"These, and the other subjects of inquiry, I will, gentlemen, if you require it, answer at a future time, fully and in detail.

"I have the honor to be, gentlemen, your obedient servant, R. RIKER.

"To Mr. AUSTIN BALDWIN, and the other Gentlemen of the Committee relative to the State Prison Monopoly."

The above letter, coming from a source better able to judge of the effect produced by attempting to reform criminals by state prison labor than any one else in the community, should have its due weight; and we do not doubt that it will.

We will now produce a few documents to show the great benefit derived by the great capitalists in contracting for prison labor, to the detriment of the working-man. We will begin with—

COOPERS.

Contract for Coopering, by Abel Wetherby, of Auburn—for 3 years, from 1832—to employ 50 convicts, viz.:

AT STATE PRISON.

2 at 50 cents per day		$1 00
9 at 30 "	"	2 70
50 at 28 "	"	14 00
3 at 12½ "	"	37½
64		$18 07½

AT REGULAR SHOPS.

Average at regular shops, 64 hands at $1 25 per day	$80 00
	18 07½
Balance in favor of contractor	$61 92½ per day.

Of the 64 hands, 9 only were coopers when sent there: of course, 55 are there learning the trade. From the above statement we see that the contract was made for 50, and that the contractor obtained the privilege of 14 more than were contracted for. Now, then, let us see the advantage accruing to the contractor by this privilege alone, granted, no doubt, by favor:

14 journeymen, at $1 25 per day	$17 50
14 convicts, at 28 cents per day	3 92
Profit on 14 hands, per day, who were not contracted for	$14 58

From the above statement, taken from official documents, it will be perceived that the profit of Mr. Wetherby, over the regular employing cooper, is $61 92½ per day. What kind of competition is this? It must be borne in mind that this is the loss of journeymen coopers. The master coopers' income, to cover shop rent, family support, and other incidental expenses, are not included; besides, interest for three months, being the credit for labor in the state prison, is also to be added.

Mr. Chichester, of Troy, has also a contract for 150 convicts at the coopering business; thus, 256 hands are employed in one branch of business, robbing the journeymen coopers of $248 32 per day, or $74,496 per year. All other trades are robbed of their rights in the same proportion. We will give the number of each trade, and beg our readers to consider the statement respecting Mr. Wetherby as a fair criterion.

At the Auburn prison the employment of convicts on the 1st of September, 1833, was as follows:

TO WORK ON CONTRACT.

Bedtick weavers and spoolers	86	
Shoemakers	44	
Coopers	61	
Hame makers	50	
Tailors	38	
Cabinet makers	49	
Tool makers	40	
Machinists	45	
Comb makers	38	
Clock makers	22	
Coverlet weavers	25	
		498

TO WORK FOR STATE.

Stone cutters		18
Weavers and spoolers	6	
Blacksmiths	6	
Carpenters	7	
Tailors and barbers	10	
Shoemakers	5	
Wood sawyers and laborers	18	
Soap boilers and hostler	3	
Attendants in Wings	10	
Cooks and washers	28	
Coopers	2	
Hospital nurses	2	
do. sick	6	
Invalids not employed	4	
Masons	8	
Laborers and tenders	20	
Stocking weavers	3	
Females	24	
		163
Total		679

Convicts confined in this prison were employed on the 30th Sept., 1833, on work as follows:

AT WORK FOR SALE.

Locksmith shop	40	
Blacksmith shop	37	
Coopers' shop	162	
Shoemakers' shop	90	
Weavers and tailors' shop	18	
Hatters' shop	11	
Stone shops	174	
Laborers in coopers' yard	22	
Do. front yard	15	
North and south quarries	76	
		645

UNEMPLOYED OR AT WORK FOR STATE.

Blacksmith shop	19*	
Shoemakers' shop	9	
Weavers and tailors' shop	38	
Cooks, bakers, and washers, in kitchen	18	
Masons, stone cutters, and laborers at prison buildings	45	
Waiters, &c. in prison hall	15	
Sick and lame in hospital	20	
Waiters in hospital	2	
		166
Total		811

So that on Sept. 1–30, 1833, there were 1490 convicts being initiated into some method of mixing with our honest hard-working mechanics, notwithstanding we have the authority of the Recorder of the greatest city in the Union for stating, that not more than two out of each hundred ever come out without returning to their vicious propensities sooner or later! It appears, on reference to Mr. Humphrey's report, that there were discharged from Sing-Sing during the six months previous to September, 1833, ninety-nine.

Of this number, worked at some mechanical branch in prison	51
Twenty-nine had worked at mechanical business before they came to prison. Two of the discharged mechanics have returned to prison; and one pardoned on condition of going to sea	32
Leaving the actual number added to the whole number of mechanics	19

And at Auburn, during the same period, one hundred and eight, namely:

Coopers	7
Tool makers	4
Shoemakers	10
Weavers	15
Tailors	4
Clock makers	2
Machinists	1
Smiths	3
Comb makers	4
Hame and saddle-tree makers	2
Cabinet and chair makers	7
Stone cutters	5
Spoolers	3
Tinman and brass founder	2
Carpenters	1
Laborers	13
Invalids	7
Females	6
Waiters, washers, and cooks	10
Barber and gardener	2
	108

Among those who have been re-committed we select the following—hundreds of others might be added.

"Charles W. Zeiss—First time sentenced to city prison, 1826; second time, August, 1831, state prison; third time, January, 1834, acquitted and arraigned for false pretences.

"James Gallagher—Three times penitentiary; three times state prison.

"Peter Bowerhorn—Four times penitentiary; twice in state prison in New-York, besides having been in southern prisons; is 32 years of age, and been 17 years in prison.

"Patrick M'Gill—Three times in the state prison for grand larceny.

"William Tryon—Once state prison; twice penitentiary.

"William Simmons—Once state prison; twice penitentiary.

"Etyler Jacox—Three times state prison.

"Brickbat, alias Owen—Once penitentiary; once state prison.

"Henry Griffin—Three times state prison, twice for forgery.

"Josiah Hagar—Three times state prison; died there—an aggravated case."

Is such a state of things to be borne? Is it not time that a most decided stand should be made against this worst of all monopolies? Are we to remain passive spectators, while our children, our brothers, and our sisters, are liable to be made the dupes and assistants in crime, of such a set of *scoundrels?* No, no! We are persuaded that the mechanics, and the friends of mechanics, in America, will now rouse themselves; they will feel it a duty upon them to give the most determined opposition to such a system—to petition, to remonstrate; and never to cease their exertions until they obtain the abolition of a custom so obnoxious and so fraught with evil to the best interests of the community. J. K.

* At work in other shops.

NEW-YORK AMERICAN.

SEPTEMBER 20—26, 1834.

LITERARY NOTICES.

NECESSITY OF POPULAR EDUCATION AS A NATIONAL OBJECT, &c. &c. By JAMES SIMPSON. 1 vol. New York: LEAVITT, LORD & Co.—With all that we hear and have heard about the march of mind, it is certain that the march of popular education has not been progressive; and although most liberal sums are annually applied—in the Northern and Eastern portion of our Republic especially—to this object, it is yet in need of great amelioration.

The political impulse of the age renders this more and more imperative. Every where, privileges and castes are giving way before the assertion of the equal right of all to participate in the duties and powers of government, and it is only through education and early and general training and culture, that this wholesome impulse can be prevented from leading to misrule and anarchy.

The work now before us is a republication. It is written and is adapted to the meridian of England, but it discusses with much ability and force, questions common to all countries, as to the necessity and the best means of educating the whole people; and as such, it may be read with great advantage here. We have not room to-day for various extracts we have marked, in which some sound and valuable suggestions are made: but feeling as we do the deepest conviction, that, even among us, the result of common school education falls far short of what, with the same means, might be accomplished, we shall find occasion to recur to this volume.

We will not here take leave of the subject of popular education, without adding, that a volume under the title of "The District School," will be published here in the course of a week or two, from the general circulation of which, having read a portion of it in MS. we anticipate much benefit to the cause. It discusses, in a familiar style, the wants, and the actual fruits, of our common school system, and suggests alterations and improvements, of, in our judgment, the greatest importance. As soon as it is published, we shall take care to bring it more immediately under the notice of our readers.

THE ORAL SYSTEM OF TEACHING LIVING LANGUAGES, ILLUSTRATED BY A PRACTICAL COURSE OF LESSONS IN THE FRENCH, THROUGH THE MEDIUM OF THE ENGLISH. By JEAN MANESCA; 2 vols, 8vo. New York: E. B. CLAYTON.

The title of this book almost explains its object; which is, discarding grammars, systems, and arbitrary rules, to habituate the ear and the attention of the learner to the language he desires to acquire, by hearing its terms repeated again and again from the lips of the master, after writing them down under his direction, with the English synonym in a corresponding column. The plan adopted by *M. Manesca* is the result of twenty years experience as a teacher; and every year added to his conviction,—and he is manifestly a man of a philosophical and reflective mind,—that in this way only can living languages be advantageously taught. As a proof of the value put by the most competent judges upon this book of *M. Manesca*, and as superseding any commendation on our part, we may mention, that the head of a distinguished school in this city, himself a well-instructed and intelligent Frenchman, after examining "The Oral System" so far as published,—for as yet we have only one volume,—has adopted it in his school.

We know, too, that *M. Manesca* has been eminently successful in imparting instruction according to his plan, and thus have practical evidence of its excellence.

AN ORATION PRONOUNCED AT NEW HAVEN BY REQUEST OF THE COMMON COUNCIL, AUG. 19, 1834, IN COMMEMORATION OF THE LIFE AND SERVICES OF GEN. LAFAYETTE, by *Jas. A. Hillhouse;* New Haven, H. Howe & Co.—The tone, manner, sentiments, and information, displayed in this address, are worthy of an American who deeply feels the obligations of his country to Lafayette in her hour of need, and who justly considers it part of an American's duty to vindicate from European calumny, a name against which in the long and turbulent annals of successive bloody revolutions, no crime nor inconsistency can be, with truth, recorded. We are grateful for such a manly, elaborate, and eloquent testimonial to the life and services of Lafayette—and hope it may be extensively circulated.

It will not be forgotten that Scott, in his life of Napoleon, imputes want of vigilance to Lafayette on the occasion of the assault by the Parisian mob on the palace of Versailles. On that head, Mr. Hillhouse thus speaks:

His most essential service, however, to his fellow citizens of that day, was the preservation of order in the capital. The Assembly, finding requisite some military counterpoise to the royal troops, chose him, with the King's approbation, commander of the civic guard. He was soon afterwards made Commander of the Parisian division of the *National Guard*, a force (some what like a militia) regularly instituted and armed throughout the kingdom pursuant to his advice. The old white, joined to blue and red, the colours of the city, were adopted as their symbol.—Addressing the Assembly on the subject of this new establishment, he uttered these remarkable words.—"Gentlemen, I bring you a cockade which shall make the tour of the world; and an institution, at once civic and military, which shall change the system of European tactics, and reduce all absolute governments to the alternative of being beaten if they do not adopt it, or of being overthrown if they do."

Idolized by this national military composed chiefly of respectable and substantial citizens zealous to repress licentiousness, he was for two years the absolute master of Paris. His influence alone made her streets safe at noonday, and secured each returning night from the perpetration of frightful tragedies. During this period of frightful fermentation when all the ancient institutions of the monarchy, crown, mitre, and coronet, rooted prejudices, and reverenced customs, were cast into the crucible of the Assembly to undergo a transformation into forms of theoretic beauty; Lafayette succeeded in preserving the domestic sanctuary from violence, and more than once snatched his unhappy sovereign, and the ill-starred queen from impending butchery.

That indescribable crusade from Paris to Versailles, composed of beings

> "Abominable, unutterable, and worse
> Than fables yet have feigned,"

has occasioned a writer, not often censurable, to soil the candor of his own pure page by leaving there a surmise to the prejudice of one whose whole life refutes it, and whose interposition on this critical occasion unquestionably preserved the Queen. Sir Walter Scott had no *right* to hint at disloyalty, or even negligence, on the part of Lafayete, after the unwearied exertions, and the known facts of that day. The interior posts of the palace were not in his charge. To the Swiss and the body guard, they were exclusively entrusted; and through a private passage in charge of, and overlooked by the latter, the assassins entered. Lafayette solicited of the King for himself and his National Guard, the protection of the *interior* posts also; but the *exterior* only were assigned him. This is expressly stated by the daughter of Necker, who was on the spot—in the palace—participated in the terrors of the night—knew all the movements, communications, and instructions of Lafayette, and would naturally remember them while memory continued to perform her office. "It is therefore absurd," says Madame de Stael, "to censure M. Lafayette for an event so unlikely to happen. No sooner was he apprised of it than he rushed forward to the assistance of those who were threatened, with an ardor which was acknowledged at the moment—before calumny had prepared her poison."—But, however generous, or impartial, (and Sir Walter Scott is both,) a British Tory writer is, perhaps, as incapable of a hearty sentiment towards Lafayette, as of complacency in the laurels of Decatur.

The King in compliance with the demands of the mob gave orders for the immediate removal of the court to Paris. *But Lafayette* apprehensive of danger to the Queen *from* the armed and infuriated rabble who were yet howling every blasphemous and obscene execration under the windows of the palace, proposed to her to appear with him on the balcony. With calm dignity she presented herself.—Not being able to make himself heard, he conceived, says Sarrans, the happy idea of kissing the hand of Marie Antoinette. *Vive la Reine!—Vive La Fayette!* resounded from the multitude. He then led out, and embraced one of the Body Guard, whom he had just saved from assassination. *Vive les Gardes de Corps!* echoed from the mouths of those consistent reformers. On his return to the royal closet, Madame Adelaide the aunt of Louis, embraced him, and called him the saviour of the King and his family. To the time of their deaths the King, Queen, and Madame Elizabeth, publicly acknowledged that to Lafayette they were indebted, on this memorable occasion, for their lives.—These are the statements, of an intimate friend and aid-de-camp of General Lafayette, who collected the facts from his own lips, and his written memoranda. By an American audience, therefore, they will be esteemed of some validity.

This testimony is conclusive.

COMPLETE WORKS OF SIR WALTER SCOTT. Parts XXXV & VI. New York, CONNER & COOK.—This cheap and excellent series is carried on as rapidly to the close, as the arrival of the copy from England will permit. The two numbers now issued comprize a large portion of the poetry of Scott—the *border* Minstrelsy, the Lay, the Lady of the Lake, &c.

REVIEW OF PROFESSOR PALFREY'S SERMON on "the Claims of Harvard College upon its Sons.—This truly eloquent and scholarlike paper appeared originally in "The Christian Examiner" for this month, but is now republished in a separate form. There is no graduate of Old Harvard who will not feel his heart moved by the appeal and memories of this pamphlet.

It is, however, less in reference to this single College than to the general cause of collegiate education in the country, that we make the following long and sensible extract.

We suppose we should not be excused, if, having in another aspect brought the College thus largely to the view of our readers, we should shrink from adverting to notorious circumstances of its recent position before the public. We would gladly be excused from this reference, if we might. In the existing posture of things, we have perhaps a different view of its expediency, in the abstract, from those irresponsible and uninformed persons, who have not scrupled to discuss very delicate questions touching the feelings of parents, the prospects of sons, and the honor of a most venerable and meritorious institution.* We shall not follow them in that discussion. The case of the government is not yet before the public. Very probably it will be, before

* The wantonness of the periodical press has perhaps rarely been more strikingly manifested, than in the course of this business. We have taken no pains to remember the instances, but one happens to be before us. One of the Boston prints, late in June, or early in July, had announced that "all the Senior class of Harvard College, who acknowledged having approved of the circular, had been dismissed, and that there would be no Commencement." Not a word of this was true. The Faculty were holding meetings; but, as was fit under such circumstances, they kept their own counsel, to that degree that their own neighbors could not form so much as a probable conjecture, how things were going on. When their decision, some two or three weeks after, became known, it proved to be a dismission, not of the whole class, but a small portion of it. And that there will be no Commencement, is an assertion that could not be safely made, as late as the time when we are writing, towards the middle of August.

Now fair men very often make mistakes; and they have a very simple way of procedure when they discover that they have done so. They say that they had been misinformed, adding, or not adding, an expression of their regret for any mischief which may have been so occasioned. But what said this editor, when better information speedily reached him? Referring to his previous insertion, he said, "We were tightly informed *in part only*. Up to this morning, sentence had not been pronounced, *but it was expected, and imminently.*"

long, by means of a report to the Overseers, or otherwise; and then, if occasion be, we, perchance, shall be found as ready as others to enter into its merits. What we care to say here, and what is here to our purpose to say, is, that we have no belief that any thing has occurred, which ought, or will, withdraw public confidence from the institution. A pretty strong proof to the contrary is already furnished, by the fact, that, at the end of the last term, in which the discontents occurred, so great a number of students was offered for admission into the Freshman class, that, if a like proportion as in past years should be kept up at the examination in Commencement week—and we know no reason why this should not be expected—a larger class will be formed than has ever entered.

We are not, then, going to discuss the character of the police laws of the College, or of their administration in any instance. They who conduct the latter are known, and the former are on record, and are always on the trial of experience. Both are subject to a control,—by a large foreign body, that of the Board of Overseers,—which the wisdom of the Commonwealth has judged to be sufficient; and when the College authority, in the several departments, has entertained an important question, the public does not commonly have to wait long, to be acquainted, in detail, with facts and reasons. But it is to our point to express the confident opinion, that any possible disadvantage, greater or less, to which the College may seem exposed, by occurrences like those of recent date, is not to be often or long incurred through their repetition. We believe it impossible that the evil, whatever it be of such combined resistance to authority, should be permanent, because of our persuasion that it stands upon bases altogether insufficient to sustain it. We are satisfied that its grounds only need to be looked at with that careful attention, which interesting consequences like those lately witnessed will secure for them, to melt away beneath the view. And, apart from this, we know the young gentlemen to be such good reasoners, that the strength or frailty of principles, on which they may have acted, will not eventually remain concealed from their perception.

One of the grounds, on which combined resistance to authority in such an institution appears to proceed, is a vague idea, that, in the relation implied in its laws, the governors constitute one party, and the students for the time being, the other; so that, if there be supposed fault to find in such laws or their execution, the latter, being the sole party in interest, are the party to find it, and to insist, if need be, on a remedy. Now the students for the time being are not the other part in that relation, but a very small portion of it; a portion so small, as to be, numerically,—almost insignificant, we would say, if the word did not seem to imply disrespect, a thing which, above all others, we mean to be careful to avoid.—No doubt they are so situated, in some respects, as to have advantages, other things being equal, for an exact acquaintance with the operation of the laws, and peculiarly to feel the present pressure, if the laws work ill. But they do not make up the party, for whose improvement and satisfaction the laws are ordained and administered; no, nor are they so much as the legal, nor so much as the rightful, nor so much as the apparent representatives of that party. The laws are made for the benefit of all the *educable* youth of the country, alike of those who may come, as of those who have come under them,—a number, of which that of the resident students at any given time is but a fraction; and they are made for the good and use of others yet, of the friends of those youth, and of the literary community at large, and of the body politic. It is not then for A, B, and C, whose names this year are on the College catalogue, to understand a supposed mal-administration as a summons to themselves to put lance in rest.—They "take too much upon them," those "sons of Levi." Before they can modestly assume that championship, they must get authority from the youth of the country, with names beginning with all the letters of the alphabet; and this done, they must get authority from the many others, who have a stake in the issue as well as they, and who, when they should be consulted, might or might not, be found to hold different views, and decline their interposition.

What then is a person, so situated, to do, when he feels himself aggrieved, and they, with whom lies the discretion, will not right him? Is he to submit to be oppressed? There is not a question easier to be answered. He is not to submit to oppression. He is to go away, out of oppression's reach. He has his own discretion in this matter, and one amply sufficient for his own protection. The College does not want to keep him to oppress, after a difference of opinion unhappily arises, if he is not inclined to stay. Unless he be chargeable with one of the higher offences, excluding him, by academic courtesy, from reception elsewhere,—a case which stands on its own grounds, and is very different from what we are now supposing,—the arm of College authority cannot touch him, an hour after he wills that it shall cease to do so. There is his remedy.—If there be mal-administration, it follows not at all that the coercive correction is for him. He is concerned for it, true, and so are very many others. He, like others, under the obligations and with the advantages of the place which he fills, may use his influence and information to have it corrected in a legal way. But that correction is no more entrusted, either in law or in common sense, to him and his two hundred and fifty associates, than to any other two hundred and fifty citizens of the Commonwealth, between the ages of sixteen and twenty. When effected, it is to be through the action of a body, which the constitution and laws recognize as the true representatives of the whole party actually concerned, the representatives of the interest of students in Cambridge and out of it, and of their friends, and of the friends of the College, of learning, and of good order.

Another impression, which seems to be implied in recent college movements, is, that the relation of classmate, or college-mate, imposes an obligation to make common cause; so that a man is concerned in honor to bring himself into trouble, by illegal measures, when legal do not avail, either to obtain redress for his associate who has in his judgment suffered wrong, or, failing of this, to express his indignation at the injustice. We speak under correction, when we say, that we suppose this to be, at Cambridge, a modern refinement. In old times, as far as we remember, general movements were occasioned by some sense of general grievance. So it was in the great commotion of 1768 So it was in that of 1807. Nor can we,—though it may, we grant, be through defect of memory or knowledge,—recall an instance, earlier than within a score of years, in which resentment of supposed individual hardship led to a considerable combination in illegal acts. But, now or old, this principle of action, we have no idea is going to stand for ever, inasmuch as it stands on no tolerable grounds. If I take my seat in a stage-coach with a stranger, I presently perceive that we have one point of sympathy together, in the journey on which both are bound. If I have common benevolence, I intend that his journey shall be a pleasant one, as far as depends on me; and little civilities begin forthwith to pass between us. If he prove to be an intelligent and well-disposed person, I am of course pleased with the opportunity of such a familiar and unceremonious enjoyment of his society. And after we have parted, should we ever meet again, I shall be gratified in recalling with him the agreeable circumstances of our accidental interview, and renewing the satisfactory communications which had occurred. If I have had such a companion in a long voyage, all relations of this description will have been multiplied, and all interest heightened that grows out of them. But, certainly, I cannot think of giving to every person with whom I may have chanced to whirl in an omnibus, or to pace a quarter-deck, such a control over my agency and standing, that his honor is to be my honor; his quarrel, my quarrel; his discredit or loss, a thing that he must be relieved from, or else share it with me. If he gets into trouble, I shall wish him, and do what I can to bring him, out of it. So much is due to charity. If I think he suffers wrong, I shall remonstrate and otherwise interest myself with the wrong-doer for his indemnification, in such a manner as my relation to the latter may make fit. So much is due to justice. If the case seems to me flagrant, I shall be willing to put myself to much expense and inconvenience to have him righted. But it can hardly be so flagrant, that I shall find it my duty to acknowledge claims (on the ground of any accidental fellowship, independent of the claims of humanity,) which shall involve disappointment and distress to other friends, to whom I am attached in obligations of the earliest date and of the closest intimacy; and it absolutely cannot be so flagrant, that I shall be willing to disregard such obligations as the latter, when the disregard of them can be attained with no benefit to him whom I would serve. Certainly I shall not, because a man is my fellow-traveller, allow that he has a right to expect me to take counsel in his behalf, on all occasions, of my feelings, which may be hasty, and of my first judgment, which may be dull. If he looks to me for good offices on the common grounds of justice and generosity, as they bear on the relations between man and man, these I understand, and there is no danger of their creating interference with any of my duties; but if on the ground of a particular relation, then there are other relations, which I ought to consider much more; relations, which will righteously call upon me, as soon as there is conflict, or danger of conflict, to give them practical precedence.

Now a college, as far as the question before us is concerned, is a public conveyance, carrying its burden four years from childhood into life. Nor is it only, nor mainly, the length of the opportunity afforded by it, to those whom it conveys, to mature a mutual interest, which causes it to give a peculiar relish to the feeling thus inspired. The intercourse, for which it affords occasion, is connected with common occupation in engaging studies, and with the rapid, and happy, and intense experience of youth. The college journey, in a word, is a journey towards fairy-land, over a region attractive enough to deserve to lie in such a line of way; a journey made by a party in high spirits, of quick perceptions, full of wit, unoccupied hearts, of like age, and with many other points of sympathy. And no wonder, that the travellers should find it pleasant, and from the very beginning feel very kindly towards one another. But after all that can be said on that side, still we cannot get so far as to say on the other, that a man is to feel himself bound, for better for worse, for richer for poorer, for well-behaved or roguish, to whosoever, unseen by him till then, has happened to vault or blunder into college on the same Midsummer day with himself. We cannot find so much as a goodly seeming pedestal of moon-shine to uphold the fancy, that an obligation created by that accident,—an accident, it may well be, and often is, which neither the parties particularly rejoices in,—is to supercede obligations which devoted years of a mother's love have been establishing, and anxious years of a father's sturdy toil. We submit, that that notion will not stand the looking at. It trembles and sways under a beam of light, like a balanced needle in an exhausted receiver. It is soon gone to be in the limbo of "things lost on earth." At all events, it will not do for our "climate and manners." It is quite too sublimated; too exquisite: too German, we would say, but that national reflections are illiberal; at least, too German after the manner of Professor Pottingen's daughter in Canning's play in the Antijacobin, who accosts another fair traveller, whom she encounters in the common room of an inn, with the proposal; "A sudden thought strikes me; let us swear eternal friendship."—And then to go on, and in this summary offensive and defensive alliance, do battle, as soon as the uncertain trumpet sounds, at the hazard of much that is interesting to one's hopes, and important in the view of one's good sense,—why, this does seem to us a most incoherent centaur-composition of excessive amenity and exaggerated manliness. It is Captain Mac Turk grouped with Damon and Pythias. Rather, it is the bravery of that worthy, engrafted on the devotion of Araminta Vavasour, and her gentle boarding-school friend:

> We walked hand in hand to the road, love,
> We looked arm in arm to the sky;
> And I said, when a foreign postillion
> Shall hurry me off to the Po,
> Don't forget your Medora Trevilian,"&c.

We do not mean to leave any body at liberty here to misapprehend us. We are not of those, if any such there be, who think lightly of the interest of the relation of classmate at college. Perchance we know about its interest, as well as younger men. Perchance we have had, in our day, as much of the good of that relation as others and have as much reason as others to know the worth of permanent friendships, there formed and nurtured. But we hope we never saw the time, when we looked upon it as the great dispensing relation of life; if we ever did, that time is so distant, though we are not octogenarians, as to have quite faded from our memory. And in those few words we have not designedly said one, to wound the feelings of any, who have been implicated in recent transactions Quite a different sentiment from any which would dictate this, is excited in every observer of tolerable rectitude of mind and heart. Those youth are our sons, or sons of our kindred, neighbors, and friends. They are born of the community's best bone, and flesh of its dearest flesh. We love every man and boy of them. We could not spare so much as one from the good public service, which we hope they are destined to render. We would trust them to-morrow with any thing, in which uprightness of mind and heart was alone concernod; and with many things which called for clear judgment, provided the case was one, in which the college idiopathy, we have been commenting on, was out of the way. There is sense and excellence among them, which ensures that their errors, if they

err, shall be viewed much more "in sorrow than in anger." We do not expect Alcibiades to have Socrates' gray hairs, though as often as he harms himself, he makes us wish that he had, for his protection, more of the philosophy he is studying. Indeed, they must be much more than commonly wise men, if, at twice their present age, they never make great mistakes. And they must be very much more than commonly good ones, if their mistakes have never a worse source, than an ill-defined and exaggerated feeling of honor. And they must be very much more than commonly fortunate ones, if they are always told of their mistakes as good-naturedly, as we have desired to comment on what we account such now.

Life of Mrs. Siddons. By Thos. Campbell. 1 vol. New York: Harper & Brothers.—Siddons and Campbell—Lady Macbeth—and the Poet of Hohenlinden—of the Pleasures of Hope—of Wyoming—is there not in this association enough to attract all readers? and when thus attracted, they will abundantly have their reward; for the volume in which these names are united is rich in interest and instruction. The criticisms by Campbell—the letters and journal of Mrs. Siddons—the anecdotes—the familiar history and stage adventures—here brought together, make up a delightful book. No one, moreover, can rise from the perusal of it, without as much respect for the character, as admiration of the abilities and eminent professional skill, of Mrs. Siddons.

The last No. of the *American Quarterly Review*, *Tales from the Garden of Kosciusko*, *Stewart's Sketches of Society in England and Ireland*, *The Doomed*, *The Token*, and other new publications shall receive early attention.

New Works.—Messrs. Key & Biddle will next week publish, Beckford's celebrated work on Italy, Spain and Portugal. Mr. Beckford, as a gentleman of taste, stands pre-eminent in England, and his work, which has resulted from a combination of the most favorable circumstances, is justly esteemed a *chef d'œuvre* of its kind.

The same publishers have in press, a volume of poems by Mrs. Sigourney, a lady who has always instructed while she pleased.

Liberia.—We publish to day an extract from the journal of one of our navy officers, which present a most gratifying view of the condition of that Colony.

MONROVIA.

Extract from the Journal of an Officer of the United States Navy.

December 11, 1833.

The town of Monrovia is on the south side of the Junk or Mesurado River, and contains about 1000 inhabitants. The bank upon which the town is built is so high, that they have the full benefit of the land and sea breezes—a very important consideration in this hot climate. There are several good stone wharves upon the river, and large well filled storehouses. Immediately upon landing we were met by a party of well dressed gentlemen, of various hues, from coal black to bright yellow, by whom we were conducted to the house of Mr. M'Gill, the present Vice-Agent for the Colonization Society. Here we met most of the dignitaries of the Colony, Judge Johnson, Col. Barbour, Mr. Warner, Mr. Lewis, and others. After partaking of refreshments that were liberally provided, we visited the houses of the different gentlemen, and were treated with universal politeness. Our arrival appears to have given rise to general rejoicing. We found among the colonists many intelligent and respectable men, who answered all our questions politely and satisfactorily. Our intercourse was somewhat constrained at first: we felt rather awkward, and there was some diffidence on the part of the colored gentry; but in a short time, all this was thrown aside, and we conversed and associated with the utmost freedom. My name attracted the attention of Judge Johnson, who was originally from New Jersey, where the name is common. Although I could not claim the honor of a previous acquaintance with the Judge, we soon became intimate; and with another of the party, I received an invitation to dine with him. The rest of the officers were distributed among the other gentlemen. I found the house of the Judge a comfortable, well furnished two story frame one, and the dinner such as you would get at the house of any of our most opulent farmers. Besides ourselves, the company consisted of the Judge and his two sons, a captain and lieutenant of artillery. Judge Johnson is a native of Trenton, New Jersey, about fifty years old, and if I may judge from the color of his skin, not a drop of white blood lurks in his veins: a man of good sound sense, not much assisted by education, the inconvenience of which he feels sensibly: and that his sons may not labor under the same disadvantage, every possible attention has been paid to the cultivation of their minds. They were so young when they left the United States, that they have but little recollection of their relative standing with the whites, and of consequence, are in a great measure divested of that awkwardness still observable among the older men, and those who have emigrated more recently. We were much pleased with the conversation of these gentlemen. They gave us a deal of information relative to the colony, of the many difficulties they had encountered, and of the its present state and prospects. There was one remark made by the Judge, so replete with good sense, that it deserves to be remembered. Speaking of the United States, he said, that when there, his greatest ambition was to secure the reputation of a good servant, in which he believed he had succeeded; and had he remained there, his life might have been dragged out comfortably enough; but he was induced to leave purely on account of his sons. They were now, he was proud to say, young men of the first consideration in the colony; and in the United States he would have been deemed fortunate in procuring them good situations as house-waiters or coachmen. The Judge does not confine himself to the bench; he sometimes officiates in the pulpit, and displayed great skill and courage at the head of the colonial troops, in some of their wars with the natives. The reputation he there earned has given him the name of the Washington of West Africa.

There are several shades of society here, but no distinct intermediate grades: all are divided into two, the *good* and the *worthless*. This last class are by no means numerous. Nine-tenths of those who fall victims to the fever are the lazy and dissipated; and those whom I found discontented and willing to return to their former state of bondage, were invariably among this class of people.

After visiting two-thirds of the houses in Monrovia, rich and poor, we embarked for the ship just before sunset.

December 12.—In my remarks of yesterday, I was ungallant enough to say nothing of the ladies—(*fair sex* would be a palpable misnomer;) and however disagreeable I may find the duty, yet I am compelled to say, that the manners of the softer sex did not excite my admiration in an unbounded degree: the cook and chambermaid turned lady, was too evident. However, there were some exceptions. It is a fact, attributable perhaps to the irregular habits of the men, that in the sickly seasons, the mortality prevails to a much greater extent among them than the women. In consequence, it is supposed, at the present time, the proportion of men to women is as one to three. This superabundance of women is the cause of great inconvenience to the men, and discontent among themselves.

There is a considerable trade carried on here—ivory, cam wood, and gold dust, are obtained from the natives, in exchange for rum, tobacco, trinkets, &c. Many of the colonists are engaged in this traffic. Some have made fortunes: this has been so tempting a bait, that too many have embarked in the business; much time and money have been lost that would have been better employed in cultivating the soil. Although a luxuriant soil, its productions fall far short of being sufficient for the consumption of the colony. Recently, some fine farms have been opened, and they are beginning to turn their attention to them. One of the principal merchants, Mr. Daily, a mulatto, and his chief clerk, Mr. Hicks, an ebony-colored gentleman, breakfasted with us. No one, however censorious, could have discovered anything in the deportment of those men, that showed a want of good-breeding.

Mr. Minor, the colonial printer, dined with us. He is a little black gentleman, intelligent, but rather diffident. It was evident he felt a little abashed, seated by one of our lieutenants, who had known him when a slave in Virginia. Several of the officers have met with acquaintances, and have taken pains to convince them that circumstances of this kind have no weight with us. We have had a good many visiters to-day, who have been treated with marked attention. Indeed, it is due them, if it were merely in return for their civility to us.

December 13.—We *supplied* the colony with some powder and shot, a boat, and other necessaries.

December 14.—The ship was under way before daybreak, and by 8 o'clock we had lost sight of the coast of Africa, all well pleased with our visit to Liberia.

J. F. S.

CHILDHOOD

He must be incorrigibly unamiable, who is not a little improved by becoming a father. Some there are, however, who know not how to appreciate the blessings with which Providence has filled their quiver; who receive with coldness a son's greeting or a daughter's kiss; who have principle enough properly to feed, and clothe, and educate their children, to labor for their support and provision, but possess not the affection which turns duty into delight; who are surrounded with blossoms, but know not the art of extracting their exquisite sweets.—How different is the effect of true parental love, where nature, duty, habit, and feeling, combine to constitute an affection the purest, the deepest and the strongest, the most enduring, the least exacting of any of which the human heart is capable!

The selfish bachelor may shudder when he thinks of the consequences of a family; he may picture to himself littered rooms and injured furniture, imagine the noise and confusion, the expense and cares, from which he is luckily free; hug himself in his solitude, and pity his unfortunate neighbor, who has half a dozen squalling children to torment and impoverish him.

The unfortunate neighbor, however, returns the compliment with interest, sighs over the loneliness of the wealthy bachelor, and can never see, without feelings of regret, rooms where no stray plaything tells of the occasional presence of a child, gardens where no tiny footmark reminds him of his treasures at home. He has listened to his heart, and learned from it a precious secret; he knows how to convert noise into harmony, expense into self-gratification, and trouble into amusement; and he reaps enough to repay years of toil and care.—He listens eagerly on his threshold for the boisterous greeting he is sure to receive, feels refreshed by the mere pattering sound of the darlings' feet, as they hurry to receive his kiss, and cures, by a noisy game at romps, the weariness and headache which he gained in his intercourse with men.

But it is not only to their parents and near connexions that children are interesting and delightful; they are general favorites, and their caresses are slighted by none but the strange, the affected, or the morose. I have, indeed, heard a fine lady declare that she preferred a puppy or a kitten to a child; and I wondered she had not sense enough to conceal her want of womanly feeling; and I know another fair simpleton, who considers it beneath her to notice those from whom no intellectual improvement can be derived, forgetting that we have hearts to cultivate as well as heads. But these are extraordinary exceptions to general rules, as uncommon and disgusting as a beard on a lady's chin, or a pipe in her mouth.

Even men may condescend to sport with children without fear of contempt; and for those who like to shelter themselves under authority, and cannot venture to be wise and happy their own way, we have plenty of splendid examples, ancient and modern, living and dead, to adduce, which may sanction a love for these pigmy playthings. Statesmen have romped with them, orators told them stories, conquerors submitted to their blows, judges, divines, and philosophers, listened to their prattle, and joined in their sports.

Notwithstanding the infinite pains taken to spoil nature's lovely works, there is a principle of resistance, which allows of only partial success; and numbers of sweet children exist, to delight and soothe, and divert us, when we are weary or fretted by grown-up people, and to justify all that has been said or written of the charms of childhood. Perhaps only women, their natural nurses and faithful protectresses, can thoroughly appreciate the attractions of the first few months of human existence.—The recumbent position, the fragile limbs, the lethargic tastes, and ungrateful indifference to notice, of a very young infant, render it uninteresting to most gentlemen, except its father; and he is generally afraid to touch it, for fear of breaking its neck. But even in this state, mothers, grandmothers, aunts, and nurses, assure you that strong indications of sense and genius may be discerned in the little animal; and I have known a clatter of surprize and joy excited through a whole family, and matter afforded for twenty long letters and innumerable animated conversations, by some marvellous

demonstration of intellect in a creature in long clothes, who could not hold its head straight.

But as soon as the baby has acquired firmness and liveliness; as soon as it smiles at a familiar face, and stares at a strange one; as soon as it employs its hands and eyes in constant expeditions of discovery, and crows and leaps from the excess of animal contentment—it becomes an object of undefinable and powerful interest to which all the sympathies of our nature attach us—an object at once of curiosity and tenderness, interesting as it is in its helplessness and innocence.

Who has not occasionally, when fondling an infant, felt oppressed by the weight of mystery which hangs over its fate? Perhaps we hold in our arms, an angel, kept but for a few months from the heaven in which it is to spend the rest of an immortal existence; perhaps we see the germ of all that is hideous and hateful in our nature. Thus looked and thus sported, thus calmly slumbered and sweetly smiled, the monsters of our race in their days of infancy. Where are the marks to distinguish a Nero from a Trajan, an Abel from a Cain? But it is not in this spirit that it is either wise or happy to contemplate any thing. Better is it—when we behold the energy and animation of young children, their warm affections, their ready, unsuspicious confidence, their wild, unwearied glee, their mirth so easily excited, their love so easily won—to enjoy unrestrained the pleasantness of life's morning; that morning so bright and joyous, and to teach us that nature intended us to be happy, and usually gains her end till we are old enough to discover how we may defeat it.

Little girls are my favorites. Boys, though sufficiently interesting and amusing, are apt to be infected, as soon as they assume the manly garb, with a little of that masculine violence and obstinacy, which, when they grow up, they will call spirit and firmness; and they lose, earlier in life, that docility, tenderness, and ignorance of evil, which are their sisters' peculiar charms. In all the range of visible creation, there is no object to me so attractive and delightful as a lovely, intelligent, gentle little girl of eight or nine years old. This is the point at which may be witnessed the greatest improvement of intellect compatible with that lily-like purity of mind, to which taint is incomprehensible, danger unsuspected, and which wants not only the vocabulary, but the idea of sin. Even the best and purest of women would shrink from displaying her heart to our gaze, while lovely childhood allows us to read its very thought and fancy.

Children may teach us one blessed, one enviable art—the art of being easily happy. Kind nature has given them that useful power of accommodation to circumstances, which compensates for so many external disadvantages: and it is only by injudicious management that it is lost. Give him but a moderate portion of food and kindness, and the peasant's child is happier than the duke's; free from artificial wants, unassisted by indulgence, all nature ministers to his pleasures; he can carve out felicity from a bit of hazel twig, or can fish for it successfully in a puddle.

He who feels thus, cannot contemplate, unmoved, the joys and sports of childhood; and he gazes, perhaps, on the care-free brow and rapture-beaming countenance, with the melancholy and awe which the lovely victims of consumption inspire, when, unconscious of danger, they talk cheerfully of the future. He feels that he is in possession of a mysterious secret, of which happy children have no suspicion. He knows what the life is, on which they are about to enter; and he is sure that, whether it smiles or frowns upon them, its brightest glances will be cold and dull, compared with those under which they are now basking.

SUMMARY.

For the *Ladies*, an importation is expected by the ship Washington, from Canton, which will have the charm of novelty, at least—*a Chinese lady, with little feet!* It is even so—Yankee enterprize never lags behind any demand, and as little feet are all the rage—though not within the reach of all—just now it has occurred to one of our Eastern brethren, to show how little, feet really can be. The lady will have a Chinese attendant with her, and receive company in a parlor furnished *à la Chinoise*. She will need, we are sure, a spacious apartment.

A bear was killed last week in the village of Bellefonte, Pa. which he visited, by the inhabitants, who turned out, armed and equipped with their tools of trade, without recourse to fire arms.

The race boat Whitehall, owing to delays in passing the locks on the Delaware and Raritan Canal, did not reach Philadelphia till 8 o'clock on the evening of the day it left here.

U. S. ship Natchez, Rio Janeiro, Aug. 7.

I have nothing new to communicate, except the arrival of the bark Madagascar, yesterday, from Boston, with a cargo of ice, which being the first that has ever been seen here, excites great curiosity.—The Brandywine sails shortly for the Pacific. The Natchez and Ontario are here, and the Erie and Enterprize expected.—[Gazette.]

Vessel Sold.—The brig Talmadge, 140 tons burthen, built of the best materials, but one year old, a fast sailer, and well found in sails and rigging, with two chain cables, &c. was sold at Boston on Wednesday for the small sum of $2550 cash.—[Gazette.]

Mr. George Jackson, sheriff of Opelousas, Louisiana, recently committed suicide, in a temporary fit of derangement. He was a gentleman much respected for his virtues, and beloved for his social and manly qualifications.

A Dilemma.—The Missouri Legislature is liberal in granting divorces. At a late session 36 were lumped in a single bill; and many of the parties divorced have since contracted new marriages. Meanwhile the legality of thus granting divorces having been brought before the Supreme Court of the State, that tribunal has decided against the act under which proceedings were instituted, as "unconstitutional, and therefore null and void."

What, under this decision, will be the position of the parties who have contracted other marriages? We give the notice of the decision from the Salt River Journal:

Important Decision.—In the case of the State of Missouri, for the use of David Gentry and wife, against Jacob Fry and others, the Hon. M. M'Girk delivered the opinion of the Court. The case was this: Gentry and his wife were divorced by an act of the last Legislature, in the same act in which thirty-six other persons were also divorced. Gentry sued Fry as the Guardian of his wife, after the passage of the act, and Fry plead the act in bar of Gentry's right to recover. The question involved was the constitutionality of that act. The opinion of the Court, *declaring the act unconstitutional and void*, was delivered at great length. After the opinion had been read, the counsel for the defendants, being dissatisfied with the opinion, prayed for a rehearing of the cause; which the Court, from the great importance to the public of the question involved in the decision, granted, and set the cause for argument at the next April term of the Court.

From this intimation of the Court, of the light in which they now view this question, would it not be well for the Legislature to refrain at their next session from passing acts of this character, until the question shall have been judicially determined? If these acts shall finally be held to be unconstitutional, the effect of the number of such acts passed by the Legislature of this State, must be disadvantageously felt in the community.

Last Saturday's Gloucester Telegraph states, that while some workmen were engaged in digging a cellar for a house about to be erected near Mr. Hough's rope walk, they discovered an Indian, in a sitting posture, facing the east, and surrounded with clam shells.

Explosion—The Powder Mills, situate at the west end of Fifth street, near Mill Creek, exploded yesterday morning, for the third time. We understand there was one man killed, and another wounded. Is it not high time that these Mills be removed farther from the city, to a more retired place.—[Cincinnati Gazette.]

[*From the Mobile Register of 4th inst.*]

Steamboat Explosion.—*Painful Occurrence.*—We have just learned that the boiler of the steamboat Tom, while stopping at Blakeley on Monday evening last for the exchange of the mail at that place, burst, by which accident three persons lost their lives. Fears were entertained that others who have not been found are also dead, and that one or two who are badly injured, will not recover. The boat we understand was broke about midships, and almost instantly sank in about 35 or 40 feet water. Some of the mails on board it is feared are lost, though it is said one bag was picked up, afloat. The persons dead are, James C. Cook, first engineer, a carpenter by the name of Wilson, and a fireman belonging to Mr. William Kitchen. A passenger, an elderly gentleman, wearing his hair in a cue, name unknown, is also supposed to be among the killed.

Since writing the above we have learned from the captain of the boat, that the elderly person who was supposed to be among the missing, is safe, and that all of the mails have been recovered—all of which we hope may turn out true.

Earthquake.—A slight shock of an earthquake was felt at Savannah, between 12 and 1 o'clock on the 13th instant. For some days previous, the weather had been unusually cool for this season of the year.

Most destructive Fire at Sorel.—On Sunday afternoon, about one o'clock, a fire broke out in the house of Mr. *George Dorge*, Sorel, situated next to one of the steamboat wharves, and ere the progress of the flames could be arrested, twelve houses and the market building, it appears, were destroyed by fire, and another house pulled down to interpose a barrier to the violence of the conflagration.

Great Fire at Utica.

From the Oneida Democrat, Thursday 8 o'clock A. M.

At about 1 o'clock this morning a fire broke out in the rear of a house owned by Mr. Dupree, on the west side of Catharine street, which was surrounded by wooden buildings, and before it could be got under had burned to the ground 21 buildings, and unroofed two more. The furniture and property, in nearly all, was saved. We can form no estimate of the loss which can be relied on, but think it cannot exceed $10,000 principally in buildings. As near as we can now learn, the buildings burned are as follows:

2 Brick dwellings on Catherine street.
2 Wooden buildings on Catherine street.
4 Wood dwellings in rear of the above.
4 Wood dwellings on Catherine street, east from the corner of Franklin street.
3 Wood dwellings on Franklin street.
1 Barn on Franklin street.
1 Wood building in rear.
2 Brick buildings on Genesee street, owned and occupied by William Clark, Esq. as the Oneida Temperance House; in one of which, adjoining the Temperance House, the Post Office was kept.
2 Wood dwellings on Catherine street, west of Franklin; unroofed. Here the fire was extinguished in that quarter, saving the Theatre, which stands next.
3 Wood dwellings next west of the Theatre were nearly torn down, to stop its progress when it should arrive there. But the exertions of the Firemen rendered the precaution unnecessary. By the promptness of the Post Master, Mr. A. G. Dauby, aided by several citizens, ALL THE PROPERTY OF THE POST OFFICE WAS SAVED. At half past 4, by the most strenuous exertions, the fire was mastered.

P. S. Nine o'clock. At half past 8 o'clock the engines were again called out, by the rising of the fire in the Post Office building, and are still at work, but no further progress of the fire is anticipated.

Prolific.—Mr. Robert Mitchell of Bovina, in this county, has raised the present season, three calves from one cow. It is seldom that an instance of this kind occurs, particularly where the calves all live and do well, as in this case.—[Delhi Gaz.]

We know not where more appropriately than at *Bovina* such an occurrence could take place.

Charleston, (S. C.) Sept. 18.—*Singular Occurrence.*—A large Alligator, about 7 feet long, was shot in the dock at Fitzsimons' wharf, yesterday afternoon, by a Captain of a vessel. The whole charge was lodged in the head of the monster, and he died immediately.

Peaches.—Beat this who can.—Jeremiah Dauchy, of this city, presented us this morning with a peach, the product of his own garden, which for weight and dimensions surpasses any fruit of this description we have ever seen; its circumference is 9 1-2 inches, and the weight 8 ounces.—[Troy Whig.]

FOREIGN INTELLIGENCE.

Later from Europe.—By the ship *Mohawk*, from Havre, Paris dates of the 9th and London of the 5th ult. are received. On the 5th, in the House of Lords, Lord Londonderry made his promised motion on the

foreign relations of England, finding fault with every thing. Lord Melbourne treated the speech of the noble Lord as one so light and negligent in manner and matter, as to render reply needless, and answers to his various desultory questions improper.

The accounts from the north of Spain are later a little than those received yesterday by the way of Cadiz, and represent the case of the Pretender as almost hopeless. His escape by sea will be prevented by the French and English vessels of war cruising for that purpose off the coast of Spain, and Gen. *Harispe* is stationed on the line of the French frontier to receive him, if he should seek refuge in France.

The papers speak of the readiness both of France and England to interpose if required *à main armée*, in restoring tranquillity to Spain. It is even said that France has been called upon by the Queen Regent for co-operation.

LATE FROM EUROPE.—Many ships from Europe arrived last week. The latest dates however, to the 16th, ult: from London, are by the Champlain, packet ship, which sailed from Liverpool on the 17th ult.

Parliament was prorogued on the 15th. The two Houses appear to have been thoroughly pitted against each other for some days previous to the prorogation.

In the House of Lords, Aug. 11th, after an animated debate, the Irish tithes bill was *refused a second reading*, by a vote of 189 to 122, Majority against the second reading, and of consequence against Ministers, 67.

The Poor Laws Amendment Bill passed the House of Commons on the 8th, after some amendments.

The King gave his royal assent to the Church Temporalities (Ireland) Bill, the Court of Chancery (Ireland) Bill, the Registration of Voters (Scotland) Bill, the South Australian Colonization Bill, the Sale of Beer Bill, and to several other bills.

Accounts from Napoli to July 8, state that Maina had submitted, and that Greece was just returning to complete tranquility.

The news from Spain is decidedly favorable to the Queen.

The Cholera had broken out at Gottenburg.—Thirty persons died in one of the suburbs in the course of a few day, and seven or eight in the city. The same disease was quite prevalent in Dublin.

Don Miguel was at Genoa on the 29th of July, and was said to be watching with intense interest the movements in Spain. The Gazette de France contains what purports to be a formal protest of his Ex-Majesty against the renunciation of the crown of Portugal. The Paris correspondent of the London Courier says it is *not* believed to be authentic; not that any doubt is entertained of the bad faith of that personage, but that his £12,000 a year would be put in jeopardy by any little hallucination of this description, which would be particularly inconvenient for a gentleman of his convivial and expensive habits.

King's Speech.—Prorogation of Parliament.

His Majesty went to the House of Lords this day (August 15) and prorogued the Parliament in the following speech:

"*My Lords and Gentlemen*—The numerous and important questions which have in the present, as in the two preceding years, been submitted to your consideration, have imposed upon you the necessity of extraordinary exertions; and it is with a deep sense of the care and labor which you have bestowed upon the public business, that I at length close this protracted session, and release you from your attendance.

"I continue to receive from all foreign powers assurances of their friendly disposition.

"The negotiations on account of which the Conferences in London upon the affairs of the Low Countries were suspended, have not yet been brought to a close; and I have still to lament a continued postponement of a final settlement between Holland and Belgium.

"On the other hand I have derived the most sincere and lively satisfaction from the termination of the civil war which had so long distracted the kingdom of Portugal; and I rejoice to think that the treaty which the state of affairs in Spain and Portugal induced me to conclude with the King of the French, the Queen Regent of Spain and the Regent of Portugal, and which has been already laid before you, contributed materially to produce this happy result.

"Events have since occurred in Spain to disappoint for a time, the hopes of tranquillity in that country, which the pacification of Portugal had inspired.

"To these events, so important to Great Britain, I shall give my most serious attention, in concert with France and the other powers who are parties to the treaty of 22d April; and the good understanding which prevails between me and my Allies, encourages me to expect that our united endeavors will be attended with success.

"The peace of Turkey remains undisturbed, and I trust that no event will happen in that quarter to interrupt the tranquillity of Europe.

"I have not failed to observe with approbation, that you have directed your attention to those domestic questions which more immediately affect the general welfare of the community, and I have had much satisfaction in sanctioning your wise and benevolent intentions by giving my assent to the act for the amendment and better administration of the laws relating to the poor in England and Wales. It will be my duty to provide that the authority necessarily invested in Commissioners nominated by the Crown, be exercised with temperance and caution; and I entertain a confident expectation that its prudent and judicious application, as well as the discreet enforcement of the other provisions of the act, will, by degrees, remedy the evils which at present prevail; and whilst they elevate the character, will increase the comforts and improve the condition of my people.

"The amendment of the law is one of your first and most important duties, and I rejoice to perceive that it has occupied so much of your attention. The establishment of a Central Court for the trial of offences in the metropolis and its neighborhood, will, I trust, improve the administration of justice within the populous sphere of its jurisdiction, and afford a useful example to every other part of the kingdom.

"To the important subjects of our jurisprudence and of our municipal corporations, your attention will naturally be directed early in the next session. You may always rest assured of my disposition to co-operate with you in such useful reformations.

"Gentlemen of the House of Commons,

"I thank you for the readiness with which you have granted the supplies. The estimates laid before you are somewhat lower than those of former years, although they included several extraordinary charges, which will not again occur. The same course of economy will still be steadily pursued. The continued increase of the revenue, notwithstanding the repeal of so many taxas, affords the surest proof that the resources of the country are unimpaired, and justifies the expectation that a perseverance in judicious and well considered measures will still further promote the industry and augment the wealth of my people.

"My Lords and Gentlemen,

"It gives me great gratification to believe, that in returning to your several counties, you will find a prevalance of general tranquility and of active industry amongst all classes of society. I humbly hope that Divine Providence will vouchsafe a continuance and increase of these blessings, and, in any circumstances that may arise, I shall rely with confidence upon your zeal and fidelity. And I rest satisfied that you will inculcate and incourage that obedience to the laws and that observance of the duties of religion and morality, which are the only secure foundations of the power and happiness of Empires."

The Lord Chancellor then declaired the Parliament prorogued to the 25th of September next.

Religious Controversy: Lieutenant Burnes and the Missionary, Wolff, at Cabool.—"Dost Mahommed Khan turned to Mr. Wolff for an explanation of his history; and, as he was aware of the gentleman's vocations, he had assembled among the party several Mahommedan doctors, who were prepared to dispute on matters of religion. Since I stood as Mr. Wolff's interpreter, I might proceed to make mention of the various arguments which were adduced on either side; but I do not anticipate what the reverend gentleman will, no doubt, give to the world. As is usual on such subjects, the one party failed to convince the other; and, but for the admirable tact of the chief himself, the consequence might have been disagreeable. The Mahommedans seemed to think that they had gained the day, and even referred it for my decision; but I excused myself from the difficult task, on the ground of being no moollah (priest).—As these reverend doctors, however, appeared to found their creed upon reason, I thought the opportunity too favorable to let them escape, if the argument I intended to use did not boast of being original. I asked them to state their time of prayers; and, among others, they named before sunrise, and after sunset. 'Such are the hours,' said I, 'rigidly enjoined by the Koran?' 'Yes,' replied the priest; 'and every one is an infidel who neglects them.'—These premises being given, I begged the doctor to inform me how these prayers could be performed in the Arctic circle, where the sun neither rose nor set for five or six months in the year. The divine had not before heard the argument: he stammered out various confused sentences; and at last asserted that prayers were not required in those countries, where it was sufficient to repeat the 'Caluma,' or creed of the Mahommedans. I immediately required the divine to name the chapter of the Koran on which he founded his doctrine, since I did not remember to have seen it in the book. He could not, for the Koran does not contain it. A sharp dispute now arose among the Afghans; nor was the subject renewed, but changed to more intelligible matters."

[*From the Baltimore American.*]

The well known misery of Madame de Stael-in her exile from Paris and France is finely pictured in the following extract of a letter written by her to Talleyrand: This letter, dated Vienna April 3d, 1808, is given in the *Courier des Etats Unis* as one hitherto unpublished.

——"You wrote to me thirteen years ago from America: *if I remain here one year longer I shall die:* I can say the same of a residence in a foreign country: I sink under it: but the time for pity has passed; necessity has taken its place. See, however, if you cannot serve my children. I believe you can; and if you can, you will. I have no means of overcoming the prejudices of the Emperor against me. If he does not think that six years of exile and six years more in age, are a century in respect of thought; if he does not think that I am another person, or at least that the half of my life is extinguished, and that the quiet of my native country would seem to me the Elysian fields, I have no means of proving it to him; but you who probably recollect me still; could you not say to him what kind of a person I must be at present, what kind of person gratitude towards him would make me, in short all that you know as well as I do?

Adieu: Shall I then not have one more talk with you before the valley of Josaphat? I have a design to go to America: I must have a country for my children. I will ask in New York where you lodged. There are moments when, in spite of my deep disgust with life, I am tolerably agreeable: then I reflect that I have learnt this language with you: but with whom to speak it? Adieu. Are you happy? With a mind so superior—do yor not go sometimes to the bottom of every thing—that is to say, as far as pain? For myself, I wish to divert my mind, but I cannot. What grieves me beyond all else, is, not to be able to give to my children, neither their country, nor the inheritance of my father. If you give me relief for all this, I will join this present moment to our last meeting and annihilate the interval. Adieu, once more: It is only thus I can conclude with you."

The inheritance referred to was two millions of francs of his private fortune left in the French treasury by Mr. Necker; which was restored to Madame de Stael at the Restoration.

TO——.

The sun is in the west,
The stars are on the sea,—
Each kindly hand I've pressed,
And now—farewell to thee!
Our cup of parting done,
'Tis the darkest I can sip,
And I've pledged them every one,
With my heart and with my lip;
But I came to thee the last
That in sadness we might throw
One look upon the past
Together—ere I go.

I met thee in my spring,
When my heart was like the fly
That on its airy wing
Sports the live-long summer by;
I loved thee with the love
Of a wild and burning boy,
Thy being was inwove
With my grief and with my joy:
Thou wert to me a star
In the silence of the night,—
A thing to see from far,
With a fear—and a delight.

The hour of joy is gone—
When man and man depart,
The deep wrung hand alone
May tell the anguish'd heart;
No tear may stain the eye,
And their parting look must be
Like the stillness of the sky,
Ere the storm has swept the sea:
But when we say farewell
To her we love the best,
One bitter tear may swell,
Nor shame the stoutest breast.

I would not that my name
Should ever meet thine ear;
I have smiles for men's acclaim,
For their censures not a fear:
Nor would I, when thy home
Looks joyously and bright,
That the thought of me should come
To sadden thy delight:
I would dwell a thing apart,
For thy spirit to descry,—
A brightness on thy heart,
A shadow on thine eye.

When the wine cup circles round,
I will quaff it with the rest,
But thy name will never sound
At the revel or the feast;
But with him who shares my heart,
When the banquet hall is lone,
In one deep cup ere we part,
We will pledge thee, lovely one!
Thy name I'll murmur then
With a prayer, if heaven allow,
To embrace thee once again
As close as I do now.

Beloved one—farewell!
And though no hope be given,
Thy name shall be a spell,
To turn my thoughts to heaven;
And thy memory to me,
What the dew is to the rose,
It shall come as gratefully,
In the hour of my repose;
It shall be—what it has been—
A lamp within a tomb—
To burn—tho' all unseen,
To light—though but a gloom.

When the shade is on thy dwelling,
And the murmur in thine ear,
When the breeze is round thee swelling,
And the landscape dark and drear;
When no lover is beside thee
To flatter and to smile,
When there be none to guide thee,
And many to beguile,
When wither'd is the token,
And all unlink'd the chain,—
With a faith unwarp'd—unbroken,
I may kneel to thee again.

MECHANICS' MAGAZINE.

THE third Volume is now ready. It consists of 384 page of letter press, and is illustrated by nearly 150 engravings on wood, spiritedly executed, and a full length portrait of LAFAYETTE, on copper, as a frontispiece.

The following are a few only of the numerous notices taken of the Magazine, by gentlemen connected with the press in different sections of the country:—

A rapid glance at its contents discovers that it contains the same judicious preparation of materials that has hitherto distinguished the publication. There are a number of articles, essentially valuable from the solid information embodied in them, and others, again, that will recommend themselves at once to the less severe reader, who always looks for some entertainment to be mingled with instruction.—[N. York American.]

The theoretical and practical Mechanic will find a mine of useful information in these pages.—[Mercantile & Advocate, N. Y.]

This periodical really deserves credit for the ability and attention with which it keeps pace with the mechanical improvements of the age. It is, we see, edited by Mr. Knight, late of the London Mechanics' Magazine, a work which did more to elevate the state of knowledge among the working classes, than any other in England.—[Commercial Advertiser.]

It is stored with representations and descriptions of improvements in machinery, and of newly invented articles, together with information valuable to every class of citizens.—[U. S. Gazette, Philad.]

It contains information on almost every subject connected with mechanics, and a register of inventions and improvements.—[Montreal Gazette.]

It is a work well worthy the attention of every mechanic and one which affords to genius a chance of exhibiting talents.—[New Orleans Merc. Adv.]

This is a publication of practical value and of deserved popularity.—[Albany Argus.]

The work needs only to become known to insure it a very extensive circulation. It certainly cannot fail to be highly interesting and useful to the numerous class of persons for whom it is particularly designed.—[Paterson Intelligencer.]

Every mechanic who wishes to keep pace with the improvement of the age—to avail himself of the aid which science is constantly bringing to art, should subscribe for the Mechanics' Magazine.—[Washington Spy.]

We wish we could persuade our young operatives—upon whose intelligence and virtue so much depends—to substitute substantial fare which this work affords, for the trash which many of them are too eager to devour.—[N. J. Journal.]

Having perused the first volume of your journal with much satisfaction, and I trust some profit, I deem it my duty as an old mechanic, to tender you my acknowledgments. * * * * In my opinion, it ought to be owned by every mechanic, artificer and manufacturer of our country; and especially by beginners, and made the study of all their leisure hours.—[Benj'n Russell, one of the oldest mechanics in Boston.]

The Mechanics' Magazine and Register of Improvements is published by the Proprietors, D. K. MINOR and J. E. CHALLIS, at No. 35 Wall street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, in advance.—JOHN KNIGHT, (formerly Proprietor of the London Mechanics' Magazine,) Editor.

jy18 6t

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf R M & F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.
J31 6t

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norrist. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad
No. 264 Elizabeth street, near Bleecker street,
New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.
J25 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fixed to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 63 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Hearttе.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Hearttе—As you have asked me to give my opinion of the merits of these Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m25

CHRISTOPHER GORE.—The following notice of the life and character of the late Mr. Gore, is from a note to the Inaugural Discourse of Mr. Greenleaf, just published.

The Honorable Christopher Gore, son of a highly respectable mechanic, was born in Boston in the year 1758, and received his primary education in the public schools of that town. He was graduated at Harvard University, with great honor, in 1776; and soon after commenced the study of law in the office of the late Judge Lowell, in whose family he resided during the whole period of his professional studies, and whose entire confidence and friendship he always enjoyed. He entered upon the practice of law in his native town, depending on himself as the artificer of his own fortune; and by his strict attention to business, diligent study, and faithful discharge of every trust, and by his manly eloquence, and gentlemanly bearing, he soon rose in the public esteem to an eminence seldom attained at so early an age. Before he arrived at the age of thirty he was sent, with Hancock and Samuel Adams, to the Convention of Massachusetts, assembled to consider the National Constitution. In 1789 he was appointed by President Washington to the responsible office of United States Attorney for the District of Massachusetts. In the critical period of our history which ensued, when the whole country was deeply agitated by the shock which the French revolution gave to all civilized communities, and our citizens, impelled by blind yet ardent attachment, were committing the most alarming breaches of professed neutrality, the duties of this office were of the most embarrassing and laborious nature; but delicate and difficult as they were, he met and discharged them with a degree of firmness, prudence, and decision, which few could equal, and none surpass. The intrepidity and talent which distinguished his conduct in this office, probably led to his appointment in 1796, with the late William Pinkney and Col. Trumbull, as one of the Commissioners under Jay's treaty, to settle the claims of our citizens for British spoliations on our commerce. It is to his powerful and convincing argument and exertions, in favor of that class of claims which was founded on captures made under the rule of 1756, that our citizens are indebted for their allowance, to the amount of many hundreds of thousands of dollars. He remained in England eight years, during part of which time he had charge of the diplomatic relations between the United States and that country, which had been confided to him by our minister, Rufus King, on his own return home in 1803, and which he sustained with great ability and honor.

In 1804, on his return to Boston, he resumed the practice of law, which he followed with his customary zeal, activity, and success, occasionally being a conspicuous member of the legislature, till 1809, when he was elected Governor of the Commonwealth. To this call of the people he most reluctantly yielded obedience, surrendering his private feelings, his professional prospects and emoluments, and his love of lettered retirement and repose. But having become convinced of the duty of making the sacrifice, he formed the resolution, which he firmly maintained, of giving himself wholly to the faithful discharge of the office, and of being the chief magistrate of the Commonwealth, and not the head of a party. In 1814 he was appointed a member of the Senate of the United States, in which office he closed his political career. Of various religious, literary, and benevolent societies in his State and county he was an active and useful member. He was for some years a most efficient and vigilant Fellow of Harvard College, to which he Institution his attachment was ardent, and its proofs substantial. His name is inscribed high among the most munificent of the benefactors of his *Alma Mater*. During his life, he gave his ample law library to the Law Department of this University; and by his will, after the provision made for his lady, and certain legacies, among which were two thousand dollars to the Massachusetts Historical Society, and one thousand to the American Academy of Arts and Sciences, of both which he was a member, he devised all the residue of his estate, not devised to his lady, and remaining after her decease, "to the President and Fellows of Harvard College and their successors, to and for the use of the University in Cambridge, and for the Promotion of Virtue, Science, and Literature, in said University." The property thus accruing, since the decease of Mrs. Gore, is valued at $91,868; which, however, is still subject to the payment of legacies, estimated at the present value of ten thousand dollars; and to some annuities. He died March 1, 1827, at the age of sixty-nine; leaving to his country, beyond his pecuniary benefactions, the legacy of his character and his example.

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wis it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by
a12 tf D. K. MINOR & J. E. CHALLIS.

CHOICE WINES, &c.

THE subscriber offers for sale, a large assortment of Wines consisting of

MADEIRA—In pipes, hhds. and quarter casks, of different qualities and brands, part received direct, and part via East Indies. superior old L. P. in hhds. quarter casks, and half quarters.

Also—in cases of 1, 2 and 3 dozen each, old and choice.

SHERRY WINE—Pale and brown, in wood and glass, of different qualities, from 14s to 36s part of it imported by order.

PORT WINE—In hhds. and quarter casks. Also, in cases of 1 and 2 dozen each.

HOCK WINE—A large assortment, of various brands, qualities and vintages, in cases and hampers, some very old.

FRENCH WINES.—Sparkling Champaign, of all the favorite brands, quarts and pints, with and without wax on the corks. Also, Pink Champaign.

Sauterne, Vin de Grave, and Burgundy.

Bordeaux Claret, Lafitte, Cheateax Margeaux, Leoville, St. Etephe.

Low priced, in boxes and casks.

Muscat, in boxes and small casks. Old Malaga Sherry, a fine light wine, in casks of 18 and 30 gallons each. Marseilles Madeira, in quarter casks and Indian barrels. Canary, Malmsey, and Teneriffe, &c. &c.

BOTTLES.—Wine, Porter and Claret, in hampers, one gross each. Demijohns.

HIBBERT'S PORTER.—London Porter, Brown Stout, and Pale Ale, in casks of 7 dozen quarts, and 8 do. pints.

SCOTCH ALE.—Younger & Co's Pale Ale, qts. and pints, &c. &c.

SALLAD OIL—Bordeaux and Marseilles, in boxes and baskets. Olives, Capers and Anchovies.

FRUIT—Bunch and Muscatel Raisins, Almonds, E. I. Preserves and Canton Ginger.

COFFEE, &c.—Old Java and Manilla, Souchong Tea, Refine White Sugars, &c.

Part of the above are entitled to debenture, and will be sold in lots to suit purchasers. Orders received, and forwarded as directed. ROBERT GRACIE,
a27 20 Broad sreet.

UTICA AND SCHENECTADY RAILROAD COMPANY.

PROPOSALS will be received until the last Monday of October next, at 12 o'clock at noon—

For grading about sixty-five miles of the Utica and Schenectady Railroad, between the Sand Ridge on Sanders' Flats in Schenectady, and the western boundary line of the town of Herkimer;

For the masonry within those limits, embracing the culverts, and the abutments and piers of the repective bridges; and

For the wooden superstructure of bridges across the Cayadutta Creek at Caughnawaga, the Garoga Creek at Palatine Church, the East Canada Creek at Manheim, the Guiph at Little Falls, and the West Canada Creek at Herkimer.

The line will be divided into sections of about one mile each, and prepared for examination, and maps, profiles and plans deposited for inspection with W. C. Young, the chief engineer, at Schenectady, ten days previous to the time above mentioned.

Blank forms of proposals will be furnished at an early day at the company's offices at Schenectady, Palatine, Little Falls and Utica.

The names of persons to whom contracts are awarded (who will not be permitted to sub-contract the same) will be made known at Schenectady on the 29th day of October, when it will be required that the grading proceed without delay, wherever, and soon as titles to the lands are acquired by the company; that the culverts and small bridges be completed by the first of August next; that the residue of the masonry and the large bridges be finished by the 1st of October thereafter; and that the grading be completed during the year 1835. Contractors to furnish security for the faithful performance of their contracts.

The use of ardent spirits to be prohibited in constructing the road.

Proposals, post paid, to be endorsed "Proposals," and containing the names of the persons offered as securities, to be addressed to the undersigned at Schenectady, or deposited at the company's office at that place. September 4, 1834.

G. M. DAVISON, Commissioner
s 17 to27 Utica and Schenectady Railroad Company.

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

☞ Spikes are kept for sale, at factory prices, by I. & J Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 232 Water street, New-York; A. M. Jones, Philadelphia; T. Janviere, Baltimore; Degrand & Smith, Boston.

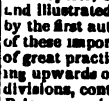
HENRY BURDEN, Agent.
Tro N. Y. July, 1831.

THE CIVIL ENGINEER AND MACHINIST.

PRACTICAL TREATISES OF CIVIL ENGINEERING, ENGINEER BUILDING, MACHINERY, MILL WORK, ENGINE WORK, IRON FOUNDING, &c. &c. Designed for the use of Engineers, Iron Masters, Manufacturers, and Operative Mechanics. By Charles John Blunt and R. Macdonald Stephenson, Civil Engineers, Architects, &c. &c. Consisting of examples worked through their entire detail of fundamental principle, organization, and process of execution; and being in every case the known great works of British and Foreign Engineering complete at length. Exemplifying the practical application of the Laws of Statics, Dynamics, Hydraulics, Hydrostatics, Pneumatics, and General Mechanics; accompanied by full reports, specifications, estimates, and journal of progress; and illustrated by the formulæ, calculations, tables, &c. in use by the first authorities. The working plans and general views of these important subjects are laid down in original drawings of great practical accuracy and careful execution, and occupying upwards of five hundred folio and imperial folio plates. In divisions, containing from ten to fourteen plates, in a portfolio. Price one guinea. Division I. is received. For sale, and subscriptions are solicited, by

WM. A. COLMAN, No. 192 Broadway,
se2 3t English Publication Warehouse.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly; either* or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany*.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a 30

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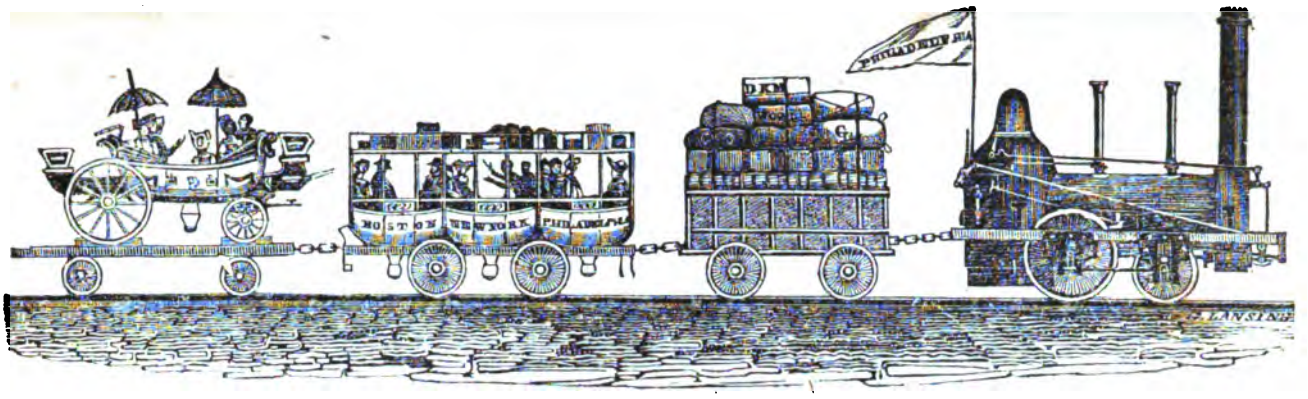

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, OCTOBER 4, 1834.

We continue to-day our extracts from the pamphlet of Mr. Robert Mills, on his proposed substitute for railroads and canals; and would invite the attention of our readers to an investigation of the facts and arguments he adduces in support of his proposition. It is a subject, in our opinion, well worthy of discussion, and one upon which communications, both pro and con, will ever find a place in our columns. Our own opinion is, that the "substitute" is, in fact, no substitute; and that the capacity of locomotive carriages for the transportation of freight on the common roads of our country, is so limited in its nature, as will ever prevent their successful competition with the various works of internal improvement already constructed. Justice to our opponent, we are aware, calls upon us to support that opinion by facts. That this is in our power to do, we feel confident enough to assert, and unless some more able advocate than ourselves will enter the lists on behalf of that opinion, we shall take some opportunity before the completion of his pamphlet of replying to the contrary.

We have received by the packet Napoleon a communication from a friend relative to the proposed railway from Amsterdam to Cologne. Aiming, as we do, to make our Journal a medium of transmission for information on all projects of internal improvement, whether in our country or abroad, we have extracted the following general facts in relation to the above important undertaking.

This work having received the sanction of the King of the Netherlands, and the King of Prussia, will be immediately commenced under the superintendence of Lieutenant Colonel Bake. The total estimate for the construction of the road, purchase of property, and locomotive engines, warehouses, &c., is estimated at 12,000,000 florins, or about 5,000,000 of dollars. This road is intended to facilitate the intercourse between the great continental emporium, the port of Amsterdam, and the important town of Cologne; from which latter city there exists a good steamboat navigation up the Rhine to Basle. The passage between Amsterdam and Cologne is expected to be performed by the trains of passenger cars in from 10 to 11 hours. The annual trade at present between the two places is 168,000 tons of merchandise, 300,000 tons of coal, and 22,000 passengers,—the transportation of the whole of which, the directors think, may safely be depended upon as being diverted to the railway.

According to the report read at the half-yearly meeting of the Liverpool and Manchester Railway Company, held at Liverpool on Wednesday, it appeared that the increase of the number of passengers, in the half-year ending 30th June, was 29,255, and of merchandise 7727 tons, conveyed to and from Manchester. The amount of receipts for passengers was 50,770*l.* 6*s.* 11*d.*; for merchandise, 44,014*l.* 5*s.* 4*d.*; total receipts, 94,784*l.* 12*s.* 3*d.*; total amount of expenses, 60,092*l.* 15*s.* 11*d.*; net profit, 36,691*l.* 16*s.* 4*d.*; added to this was 1332*l.* 2*s.* 2*d.*, the surplus profit of the half-year ending 30th June, 1833, making 36,023*l.* 18*s.* 6*d.*, from which sum the committee were enabled to recommend a dividend of 4*l.* 10*s.* per share.

Tides.—It is intended to make a series of tidal observations round the coast of Great Britain and Ireland, on the same days, for 16 days together, from June 7th to June 22d next. The object is, to ascertain by how much the time of high and low water at each place is before or after those times at the neighboring places; and also to determine, wherever it can be done conveniently, the comparative rise and fall of the tides at the different intervals between the morning and evening tides, or any other differences which regularly affect their height. For this purpose the exact time of high and low water, especially of the former, and the height above or below some fixed mark, are to be observed every day and night during the above mentioned period. The observations thus made, and the results of the comparison of these with others, will be published along with the names of the officers by whom they have been superintended.—[From instructions issued by the Admiralty.]

Geological Surveys.—The Geological Society of Pennsylvania has employed Mr. S. Clenison to visit and report on the gold region recently discovered in York county, in that State. This gentleman has recently returned from Paris, where he has served a long and faithful apprenticeship in the school of mines. The Legislature of Tennessee has recently appointed Dr. G. Troost to make a similar survey of the State. Professor Hitchcock has completed his geological survey of the State of Massachusetts. Professor Ducatel is appointed by the Legislature of Maryland to make a geological and topographical survey of that State. Mr. G. W. Featherstonhaugh is engaged under the authority of the United States in a geological and mineralogical investigation of the territory of the Arkansas: his report is expected to be made to Congress in February next. These various and simultaneous appointments evince a determination to develope the mineral resources of the country in good earnest.—[New-York Enquirer.]

We are gratified to learn, says the Baltimore American, that the Chesapeake and Ohio Canal Company have effected the loan of two hundred thousand dollars from the United States Bank, in reference to which a meeting was held in that city last week. This sum will enable the Canal Company to complete their works to a point eight miles above Williamsport, during the present season, and will put out of jeopardy two costly dams across the Potomac, which would probably have been swept away by the next winter torrents, if they had been left in an unfinished state.

Boston and Providence Railroad.—We are desired to state that all passengers hence in the Rhode Island steam boats, who prefer this route, will hereafter on their arrival at Providence be conveyed by the *Tremont line of Stage Coaches* to Canton at the *reduced fare* of *two dollars*, and at that place take the Railroad Cars to Boston, 18 miles distant.

The value of *real* and *personal* estate in the city and county of New-York, by the estimate of this year's assessment, amounts to *one hundred and eighty-eight millions of dollars!!!*

Tuscumbia, Courtland, and Decatur Railroad.

Tuscumbia, Ala., August 19, 1834.

To the Editor of the American Railroad Journal :

Sir,—In your list of railroads, contained in your Journal of 26th ult., (No. 29,) I note several material errors, in the description of the Tuscumbia, Courtland, and Decatur Railroad, and have therefore concluded to furnish you the following short history and description of the said work, from its beginning.

The first charter for a railway, obtained in the state of Alabama, was granted in January, 1830, for the incorporation of the Tuscumbia Railroad Company, with a capital of $20,000. The object of this road was to connect the town of Tuscumbia with the Tennessee river ; the distance being a fraction over two miles. The stock was immediately subscribed, and the company organized ; but, in consequence of difficulties in obtaining the right of way along the route, nothing was done towards the execution of the work till in June, 1831, at which time it was commenced, and was completed about the 1st day of June, 1832. A good portion of the line is curved, and some of the curves are on radii of 400 feet. The maximum inclination in the grade is 20 feet per mile. The construction is of cedar sleepers laid transversely of the road, 5 feet from centre to centre. Oak string pieces, 5 by 7 inches; capped with an iron rail, 2 inches by ½ an inch ; width of track, 4 feet 9¼ inches, between the inner edges of the iron rails. One truss bridge 274 feet long, 36 feet high, (over a ravine,) and several embankments of 15 feet in height, had to be built. This cost of the road is something under $5,000 per mile.

The charter for the Tuscumbia, Courtland, and Decatur Railroad, was obtained in January, 1832, with a capital of $1,000,000. A sufficiency of stock was immediately subscribed, and the company organized. The surveys were commenced in February, (same year,) and, in May, a portion of the line was put under contract, and the work of graduation commenced since which time ; the work has been steadily progressing ; and, on the 4th of July, 1834, the road was completed into the town of Courtland, a distance of 23¼ miles from Tuscumbia. The balance of the line, between Courtland and Decatur, (a distance of 19¾ miles,) is now rapidly progressing, and will be entirely completed in the month of October next. The whole length of the Tuscumbia, Courtland, and Decatur Railroad is 43 1/10 miles ; of which distance 36 55/100 miles is straight line, and 6 55/100 is curved line. There is but one curve, on a radius of less than 1512 feet, which is 1380 feet. The profile is undulating, under a maximum grade of 25 feet to the mile.

The construction is in all respects the same as the Tuscumbia Railroad, excepting that the sleepers on this are only 4 feet apart from centre to centre, and that about one-third of the distance is, and will be, lined with cedar, (instead of oak,) string prices. The cost of this road will average a little under $4,000 per mile. The whole length of the railroad, between its termini, upon the Tennessee river, (inclusive of the Tuscumbia section,) will be 45 29/100 miles ; single track, with turn-outs and side-lines about every two miles. And by an amendment obtained to their charter, the company is authorised to extend their road, both eastwardly and westwardly, to the state line, so soon as the said road shall have been completed to Decatur.

The motive power used has been horses, up to about 1st June last, when the company received a locomotive engine made by E. Bury, of Liverpool. The engine weighs about 4½ tons, works cylinders 8 inches diameter, with a stroke of 16 inches. Her performance is such as has determined the Board of Directory to dispense with horses altogether, so soon as a sufficient number of engines for their business can be procured. With a light load this engine has at divers times attained a velocity of 40 miles an hour. Pine and ash wood has been used as fuel ; but so soon as the road is finished to Decatur, it is contemplated coal will be used exclusively, as that can be obtained cheap, and is entirely safe from sparks.

The principal object with the projectors of this work, at its beginning, was to obviate the great difficulties and obstructions presented to commerce by the Muscle shoals in the Tennessee river. The feasibility and utility of continuing it westward to Memphis was also much spoken of; but within about one year, the project of the great " Atlantic and Mississippi Railroad" has excited an entire new interest, to wit, that of this road becoming a link in the great chain of railway communication from Charleston, South Carolina, to Memphis, Tennessee.

A charter has been obtained, by a company, in January, 1834, authorising the construction of a railroad from the town of Moulton, to intersect the Tuscumbia, Courtland, and Decatur railroad, at or about Courtland, with a capital of $100,000. The town of Moulton is situated about 15 miles due south from Courtland. The stock was taken, and the surveys are now in progress. A company was also incorporated in January last, with a capital of $75,000, to construct a railroad from Athens, (situated about 15 miles north of Decatur,) to the Tennessee river. The stock was subscribed, and some surveys made, but the results and final determination of the company are not known to me. A charter was granted in January last to a company styled the " Alabama and Tennessee Railroad Company," with a capital of $300,000. This road is to be constructed between Florence, Ala., and Pulaski, Tennessee, a distance of about 60 miles. The stock is taken and some surveys have been made, but the work not yet commenced. The citizens of Elkton, in Tennessee, are very anxious to connect themselves with the Tuscumbia, Courtland, and Decatur Railroad, by way of Athens, Alabama. Elkton is situated about 20 miles north of Athens. The ground is generally favorable for a railroad. Charters for this object will, without doubt, be obtained from the legislatures of Alabama and Tennessee, at their next session.

I am very respectfully your obedient servant,

David Deshler,
Chief Engineer Tuscumbia, Courtland, and Decatur Railroad.

Substitute for Railroads and Canals, embracing a New Plan of Roadway, combining, with the Operation of Steam Carriages, great Economy in carrying into effect a System of Internal Improvement. By Robert Mills, Engineer and Architect.

(Continued from page 594.)

NO. III.

In confirmation of the evidence given before the committee, on the operation of locomotive engines on common roads, Mr. Summers stated, " that they have travelled in Mr. Hancock's carriage at the rate of fifteen miles per hour, with nineteen persons on the carriage, up a hill rising one in twelve ; that he has continued, for four and a half hours, to travel at the rate of thirty miles per hour ; and that he has found no difficulty of travelling over the worst and most hilly roads."

Mr. James Stone stated, " that thirty-six persons have been carried on one steam carriage, and that the engine drew five times its own weight, nearly, at the rate of from five to six miles per hour, partly up an inclination."

These several witnesses estimated the probable saving of expense to the public, by the substitution of steam power for that of horses, at from one-half to two-thirds ; and Mr. Farey gave it as his opinion, " that steam coaches will, very soon after their first establishment, be run for one-third of the cost of the present stage coaches ; and that this saving would increase in the ratio of the increased speed."

Nor are the advantages of steam power confined to the greater velocity obtained, or to its greater cheapnes, than horse draught. In the latter, danger is increased in as large a proportion as expense, by greater speed. In steam power, on the contrary, " there is no danger of being run away with, and that of being overturned is greatly diminished. It is difficult to control four such horses as can draw a heavy carriage ten miles per hour, in case they are frightened, or choose to run away ; and, for quick travelling, they must be kept in that state of courage that they are always inclined for running away, particularly down hills and at sharp turns in the road. In steam power there is little corresponding danger, being perfectly controllable, and capable of exerting its power in *reverse*, in going down hills.

Every witness examined gave the fullest and most satisfactory evidence of the perfect control which the conductor has over the movement of the carriage. With the slightest exertion it can be stopped, or turned, under circumstances where horses would be totally unmanageable.

NO. IV.

Steam has been applied, as a power in draught, in two ways : in the one, both passengers and engines are placed on the same carriage ; in the other, the engine carriage is merely used to draw the carriage in which the load is conveyed. In either case, from the judicious construction of boilers, which has been adopted, the probable danger from explosion has been rendered infinitely small. Mr. Farey stated, that " the danger of exploding is less than the danger attendant on the use of horses in draught; that the danger in these boilers is less than those employed on the railway, although there, even, the instances of explosion have been very rare."

The boilers in these steam carriages expose a considerable surface to the fire, and steam is generated with the greatest rapidity. From their peculiar form, the requisite supply of steam depends on its continued and rapid formation ; no large and dangerous quantity can at any time be collected. Should the safety valve be stopped, and the supply of steam be kept up, in greater abundance than the engines require, explosion may take place, but the danger would be comparatively trifling, from the small quantity of steam which could act on any one portion of the boilers. The committee mention an engine invented by Mr. Trevithick, which, should it in practice be found to answer his expectation, will remove entirely all danger from explosion. All cause of annoyance, from these engines, has been done away with : the use of coke has destroyed the issue of smoke, and the waste steam is made to discharge into the fire, or is applied to aid the draught, and more rapid combustion of the fuel. In Mr. Trevithick's engine it will be returned into the boiler.

NO. V.

The Committee went into an examination of the comparative injury which these steam coaches would do to the roads, and were satisfied that the deterioration of the road will be much less by a steam carriage than by a coach and horses. One important fact was proved, that roads receive greater injury from the *horses' feet*, than the *wheels* of the carriage drawn. The roads in England have, at present, to sustain waggons, weighing, at times, with their horses, nearly ten tons. Steam carriages, including engine, fuel, water, and other attendants, need not exceed three tons. The last carriages built by Mr. Gurney were stated to weigh not more than thirty-five cwt., with the same power attached to a carriage weighing four tons. Mr. G. was at this time (1831) building a carriage to weigh but about five hundred pounds, which he expected to do the work of one horse, and carry two or three people. The weight of an ordinary stage coach is between eighteen and twenty-four

ewt., which carries about eighteen passengers. The weight of the propelling steam carriage is about the weight of the four horses. The weight of the carriage drawn would be precisely that of a carriage drawn by horses.

At the ordinary rate of travelling, the average pressure on the boiler of Mr. Gurney's engine, per square inch, was about seventy pounds; and he proved the tubes of his boiler to eight hundred, and thought they would bear two thousand pounds.*

The perfect command in guiding these carriages and the stopping of them, are singular. In case of emergency, says Mr. G., we might instantly throw the steam on the reverse side of the pistons, and stop within a few yards: it would be possible, he observes, to stop the carriage within six or seven yards, going at the rate of eight miles per hour.

The facility of turning these carriages is also remarkable; they have been turned in a circle of ten feet, the inner diameter.

NO. VI.

The degree of safety to which the boilers of these steam carriages is brought does away all idea of danger from explosion. To one of the questions of the committee, referring to this subject, Mr. Hancock makes the following answer: "I was travelling about nine miles an hour, at the time the boiler was the twenty-fourth part of an inch thick; I was working then at one hundred pounds on the square inch, with thirteen persons on the present vehicle that I have now in use; and all of a sudden the carriage stopped, and for what reason I was at a loss to know. I got from my stage seat, and went to the engineer, to ask him what was the reason he had stopped the steam? He told me he had not stopped the carriage, and he immediately applied his hand to the gauge cocks. I found there was neither steam nor water in the boiler. I immediately knew that the boiler was burst: the passengers said that they did not know it, as they heard no noise; and I told them that I did not mean they should know it. I said I would show them that it was so; and I took the boiler from the carriage and unscrewed it, and there were four large holes that I could put my hand into. This occurred from the chambers being too thin, and they drove all the water out of the boiler, and yet there was no injury to any person; there was not one person that heard any report; there was no steam, and there were no symptoms in any way that the machine itself had burst."

Mr. Ogle, in describing his carriage, observes: "No accident from explosion can take place. We have had whole families of ladies day after day, out with us in all directions, and who have the most perfect confidence."

The machinery of all these carriages is suspended on springs. The engines work, therefore, as smoothly as if they were fixed on the firmest foundation. Indeed it is stated in this evidence, that "the vibration or jar is much less in these vehicles on common roads than on a railway."

NO. VII.

With a few more remarks upon the operation of steam carriages on common roads, we will proceed to explain the plan of way which it is proposed to substitute for that of railways and canals.

The capacity of steam carriages to ascend hills of considerable inclination is a very important point of usefulness of these vehicles. To inquiries made by the committee on this subject, we find the following answers returned: Mr. Gurney remarks, "It was at first a very prevalent opinion, that the bite or friction of the power on the ground was not sufficient to propel the carriage along a common road, especially up hill; it was thought that the wheel would turn round and the carriage not proceed"—but his carriage went up Highgate hill and to Edgeware, also to Stanmore, and against all those hills the wheels never turned; and the bite of one of the hind wheels was sufficient for all common purposes,—the carriage ran to Barnet, and went up all the hills to that place with one wheel only attached to the axle, and was run for 18 months experimentally, in the neighborhood of London.

From these trials, showing that one wheel was sufficient to propel the carriage, and the carriage being at the same time reduced two-thirds in weight, it was thought desirable to draw another carriage, instead of to carry on the same. This carriage went to Bath, and over all the hills between Cranford bridge and Bath, and returned, with only one wheel attached to the axle, and ran from Melksham to Cranford bridge, a distance of 84 miles, in ten hours, including stoppages.

Mr. Hancock repeatedly tried his carriage up hill on an inclination, and never found any difficulty, except once, when the frost was on the ground, when he attempted to run up the Pentonville hill with one wheel only, and he did it, but with some difficulty towards the top. "If I had propelled by the two wheels," says Mr. H., "there would have been none." Mr. H. further remarked, "I think there are no hills to be found upon which horses travel, but what a coach would propel itself up."

Mr. Trevithick testified, "There is no ascent that any common carriages go over, where the steam carriage will not go down the hill with one wheel chained; no road in the neighborhood of London that they would not run down with one wheel chained. If you are drawing up hill with two or four wheels driven by an engine, by their all turning round, they are as likely to go up hill. One wheel ought to put it up hill. It will go up a hill of double that ascent without slipping."

* Mr. Hancock has worked his boiler under a pressure of four hundred pounds on a square inch; his average is from sixty to one hundred. Mr. H. mentioned an instance of the little noise which was made in working his engine. He watched near an hour in London for a friend of his, during which time the machinery was at work; and though there were hundreds of people walking round it, they appeared not to know it was working; there was no noise at all in the machinery, "and you could not," so says Mr. H., "unless you had gone to the back, known that it was working."

TUNNEL UNDER THE OHIO.—A writer in the Cincinnati Journal recommends the construction of a railroad under the Ohio river, opposite that city. The following is an outline of the plan:

The railway is to consist of two semi-ellipses, one above and the other underneath. The height of the upper arch to be 10 feet, and the lower 3 feet, and 24 feet in width inside, making the ellipse 13 feet high and 24 feet wide in the clear. The arch to be composed of cut stone masonry two feet thick. This arch is to be buried in the ground just sufficient to protect it from the action of the river. A floor composed of timbers laid lengthwise, on the bottom of the arch, and covered with planks, forms the carriage-ways and side-walks. The carriage-ways to be each 8 feet wide, and the side-walks each 4 feet wide. The side-walks are a little raised above the carriage-ways. The stones composing the arch are to be cut so as to form segments of the ellipses, and laid in hydraulic cement, and made as near water-tight as practicable. Notwithstanding all the care that may be taken in the construction, yet with a pressure, in time of high water, of 4375 pounds upon each square foot of the arch, the water will percolate through in such quantities as to require an engine to keep the road dry. It will of course be necessary to light the interior when opened for travel.

Between high and low water marks, there is a difference at this place of about 63 feet, and allowing the top of the arch to be 7 feet below low water in the bed of the river, and placing the bottom of the arch at each end, at high water mark, will make the total descent 83 feet. It is thought that one foot ascent in twelve feet horizontal distance is the greatest inclination the road will admit; consequently, the length of the inclined arch, from high water mark to the bed of the river, will be about 1000 feet; and allowing also that the bed of the river at low water is about 1000 feet wide, will make the total length of the road 3000 feet.

The only difficult point in executing the work will be in excavating the earth and rock below low water. It is quite practicable, however, in a dry season, at comparatively small expense, to enclose a space with a frame of timber and plank, made water-tight by placing bags of earth around the outside, and pump out the water with an engine placed upon a flat boat, until the excavation is completed and the arch formed within the space enclosed. Then by moving the same coffer-dam its length farther along, another space can be enclosed, and the work completed in the same manner, and repeated until the bed of the river is crossed. This part of the work will depend upon so many contingencies that no accurate estimate can be made of the expense attending it. The masonry of the arch and the flooring can be estimated with tolerable accuracy. The stone for the work can be obtained one hundred miles up the river, where extensive quarries are already opened. The cost of the masonry will be as follows:

Quarrying the stone per perch of 16½ cubic feet			$1 00
Delivering	do.	do.	2 50
Cutting the same with three faces,		do.	2 25
Mortar of water, lime, and sand,		do.	50
Laying the stone, including centering,		do.	75
Cost per perch,			$7 00
Every 10 feet in length of the arch will contain 78 perches of masonry, which, at $7 per perch, will be			$546 00
Every 10 feet in length of the floor will contain 100 feet of timber, at 12½ cents per foot, $12 50 —220 feet of plank at 3½ cents, $7 70			20 20
Total cost of 10 feet of the road-way			$566 20

Which being multiplied by 300, for the length, will give $169,860 for the total cost of the arch and flooring. If to the above we add the probable cost of pumping the water and excavating the earth and rock for the road-way, and of covering the arch over again 3 feet deep, it will make the total expense not less than $210,000. To which should be added $20,000 for superintendence and expenses of the affairs of the company, &c. There can be no doubt that the stock in such an undertaking will yield a handsome profit.

It will be observed that a road-way, constructed upon the above plan, leaves the river entirely unobstructed; that the arch is completely out of the reach of injury from the river; that it is permanent, solid, and will last for ever; and that it involves but a trifling expense to keep it in order for constant use.

DISCOVERY OF SILVER ORE IN THE OURAL MOUNTAINS.—The Oural chain has been for several years well known to Europe for its rich gold and platina ores. A discovery has now been made of rich silver ore in two places. The first is seventy wersts from the foundry of Nischneitagilsk, near to the confluence of the little River Graesnoy with the Tagil, where gold also occurs; the other is twenty-two wersts from the foundry of Nischneitagilsk, on the little River Ulka.

[For the New-York American.]

The opinion is now generally prevalent, that some change must be made in the employment of the inmates of our State Prisons, to relieve the mechanical classes from the effect of their competition, and this opinion will doubtless be confirmed by the report of the committee to the next Legislature. The question will then arise—in what way can the change be best effected?

In reflecting upon the subject, the following plan has occurred to me, and I offer it as a suggestion. Good roads are among the most important public conveniences, diffusing their benefits universally, and they are also one of best investments of public wealth. Their construction will *interfere* with none of the general avocations of society, but on the contrary, will directly or indirectly promote the interest of all pursuits. Can the labor of the convicts be applied to this object? I think it can, without inconvenience or difficulty, and at the same time the present prisons be useful auxiliaries to the plan, which I will concisely describe.

The convicts to be divided into companies of ten, twenty, or thirty, or as many as one individual can manage, each company to be provided with a strong moveable prison, composed of apartments, say four by seven feet, equal to the number of the company, for security at night, with moveable accommodations for cooking, &c. &c. all of which is entirely practicable. A corps of engineers for the survey and direction of the construction of roads on a great and permanent scale to be established, who shall direct the operations. When a continuous line of road is decided upon, these companies to be placed upon it at proper distances, and employed upon it till it is finished in the best manner possible. When this is completed, they move to another, until the whole State is traversed by good roads, if we are so unhappy as to have convicts to construct them.

If the Prison at Sing-Sing could be made as it was, there is not the least difficulty, by the adoption of a similar system of management, of applying the same labor to the object proposed.

The operations to commence on the 1st of April, and be continued until the 1st of December—eight months: the convicts then to return to their respective prisons, and spend the winter in the acquisition of knowledge, and in the duties of religion, with the exception of such labor only as would be useful to their winter establishments, and in preparation for their summer campaign at road-making, rendering it a season of rest and moral improvement, to which they might look forward during their months of toil, with hope and pleasure, and which, by being continuous, would be more efficient, as constant application to any given subject, is more efficient than the same efforts if desultory.

These are mere hints, to induce reflection in those to whom is intrusted the direction of these important matters, and I feel satisfied they are practicable, and deserving of at least a trial, the best mode of testing any project of improvement.

Hancock.

[*From the Lexington Gazette, of 20th inst.*]

THE DRAGOONS.

The Camanches—Kiaways—and Wacos.

Fort Gibson, Aug. 19th, 1834.

My Dear Sir: It is with great pleasure that I embrace the earliest opportunity of giving you a few of the particulars of the dangerous, honorable and successful campaign from which we have just returned; but am sorry to have to relate to you the melancholy intelligence of the death of Gen. H. Leavenworth, who died like a man in the service of his country, on the 20th ultimo, at his own encampment about 80 miles in our rear on the very day we reached the Pawnee Pick village, three days after we had left that of the Camanches. He had with him provisions for Col. Dodge's command, one or two companies of infantry, and one field piece.

On our arrival at a new post which had been established by order of Gen. Leavenworth, near the confluence of the False Washita with the Red River, at which we expected to have found a sufficient supply of provision to enable the whole regiment to march in pursuit of the Pawnees and Camanches, we learned that the Pawnee Picks had lately visited that neighborhood and murdered a Judge Martin, of Arkansaw, and his servant, whose bodies had been found, and carried off his son, a lad of seven years of age. Here Gen. Leavenworth issued an order to Col. Dodge, to select 250 of his most efficient men and horses, and take with him 10 day's rations to last 20 days, about which time he promised to meet us with a further supply; and most faithfully would he have performed his promise had he not been called upon to pay the great debt of nature. His complaint was a raging fever, and it is said that he was so sensible of his approaching dissolution that he made arrangements about his funeral and settled the affairs of his estate before his death. His body is, I understand, still near the Cross Timbors, from which it cannot be removed till a change of weather.

We had with us two young squaws, one of which was a Kioway, and the other was a Pawnee Pick, whom Gen. Leavenworth had purchased from the Osages, by whom they had been taken prisoners, the former about one year ago, the latter about five years ago, and whom we expected to make interpreters to their respective tribes. Not long after our departure from our camp Washita, we were so fortunate as to encounter a considerable party of Camanches, who, after much manœuvring, were induced to come up to us, and as neither of our captive girls could speak their language, we were at some loss; but one of them understood Spanish, and through him and one of the Delawares who understood the same language, Col. Dodge was able to soothe the whole party, and procure among them a pilot to their village, which we found rich in horses, with which the plains were literally covered, but in most defenceless condition, as the warriors were mostly absent upon a buffalo hunt. This village contained 340 lodges made by stretching buffalo skins upon light poles in bell fashion, which are moved by tying them to the saddles of their horses, wherever it suits the convenience of the tribe. The Camanches do not cultivate the earth, but procure their corn, beans, pumpkins and melons from their neighbors, the Pawnee Picks, so called on account of their picking themselves with powder or some blue substance on their arms and breasts—but who call themselves *Tawèash*—for which they pay their jerked buffalo meat. The Camanche children are less in the way of their Amazonian mothers, who arm themselves with bows and arrows, and ride and dress after the same fashion of the warriors. In infancy they are tied to a board and handled with great roughness—at three years old they manage a horse themselves, and at four or five engage in driving about five thousand horses. They were when we reached their village, located east of a cluster of towering Rocky Mountains, of prodigious height and grandeur which are supposed by some of our most intelligent officers to be spurs of the great Rocky Mountains. Col. Dodge laid two days at this village with the expectation of meeting their principal chiefs, for whom a messenger had been despatched; but as we were now scarce of provisions and greatly incumbered with sick, a pilot was procured, and we commenced our march for the village of the Pawnee Picks. On the evening of the first day that we left the Camanche village, we made a fortification where we left our sick, with a detachment to defend them, and with our reduced force marched upwards of two days to the Pawnee Pick or Toweash village, over and through the passes of those mountains:—upon our march we reached a lofty cleft which overlooked a valley of considerable extent, where our Kioway girl raised herself in her saddle, and addressed the Osages in the most animated manner. She told them that she was in her own country—that she had often rode, hunted and played in the valley beneath us, and pointing to the north-west, observed, that her village lay in that direction, and that one day's travel would enable us to sleep at it; but when our guide, a Pawnee Mahawk and a dull fellow bore off to the south-west, her countenance fell.

This fellow took us a serpentine route and greatly out of our way, but I have no doubt of his honesty; but went through the passes of the mountains where he had been in the habit of travelling. As we approached the village of the Pawnee Picks, they met us with considerable display and evident distrust, and when we arrived, the old chief implored Col. Dodge not to fire on the village.

Here a negro fellow who had run away from this neighborhood and taken up by the Camanches, confirmed the information which we had previously received from that tribe, of there being a white boy who could speak English at the village of the Pawnee Picks. On the second day after our arrival, Col. Dodge, with all the officers under his command, with the exception of myself, who as officer of the day, remained in command of our encampment, and Lt. Northrop, who was officer of the guard, repaired to the Council House in the village for the purpose of holding a Council with this tribe.

The accidental firing of a pistol in the hands of one of the Cherokee Indians, who accompanied us on this campaign, created great confusion at this Council, and was near having a serious termination. The warriors fled precipitately from the Council House to their lodges for their arms, and the women and children to the rocky mountains, under which their village is built, for safety; but the brave Col. Dodge, with his usual firmness and good management, soon restored peace and order. After assuring them of his disposition to be at peace with them, he told them what he had heard about the white boy, and informed them that he would say nothing more in Council until that boy was produced. Confusion marked the countenances of the Chiefs, but as there was no alternative, the boy was sent for and given up to Col. Dodge in exchange for the Pawnee Pick girl. This little naked urchin, whom we have still with us, and who proved to be the son of Judge Martin, who was killed near Fort Washington, was delighted and astonished at hearing his own language spoken, and asked emphatically if these were all white people around him; and when asked by Col. Dodge his name, he answered without hesitation, "Matthew Wright Martin;" he told the Colonel that his father was still alive—that he saw the Indians shoot him in the back with their arrows, but that he run off and left them, and that they had drawn their gigs (spears) upon him, but that his life had been saved by the warriors with whom he then lived. On the next day after this Council the Chiefs of the Camanches, Kioways and Wocos, arrived at our encampment, with whom a Council was appointed to be held on the day following. This Council was held in our encampment, and was attended by near three thousand warriors. So great was the concourse that I could scarcely see beyond the limits of my own company, who stood by their arms in readiness to act at a moment's warning; and I know it will be gratifying to your feelings to hear that this band of brave Kentuckians would have done their duty if fighting had become necessary. But the excellent management of Col. Dodge upon this occasion superseded the necessity and terminated the affair honorably to himself and to his command, as well as advantageous to his country. The gratitude of the Kioways was unbounded when Col. Dodge gave up to her nation our Kioway prisoner. Her uncle, who was a chief, made a most animated address to his people on the occasion; he told them that the man who had travelled so far to restore to them their lost daughter must be a very great and a very good man; and that he longed to embrace him with the arms of friendship and love. Twenty men of the different tribes, most of whom are great men among their nations, are now with us. They are astonished and delighted at all they see and hear, and are much gratified at the presents we have given them. Col. Dodge is, I believe, anxious to send them to the Hermitage to see General Jackson, but the Indians themselves would rather return home at present to display the presents they have already received, and visit us upon another occasion with more of their people. Although there has been no blood shed upon this campaign, I look upon its termination as adding in a high degree to the military fame of Col. Dodge, who displayed a degree of perseverance in marching us without food in an enemy's country to their very villages, and obtaining from them a supply of provisions to last us to the buffalo country; forming with them treaties of peace and friendship, and obtaining from them one of our people, whom they had in bondage, and supporting that part of his regiment which was under his immediate command without any provisions from Government for near sixty days, and that too in an enemy's country, upon their own resources and her hunters.

In addition to all this, he has visited tribes of Indians who have never before been overtaken by any armed force whatever, although often pursued, and has brought their principal men with him to observe civilized society, and explored a country within our own limits possessing a great many advantages, which has not been laid down on our maps, and about which very little has been hitherto known; and all this has been done with less than two hundred and fifty troops. If ever I felt like a soldier, it was when I saw this band undismayed as it was, surrounded by such a prodigious armed force as that which surrounded it on the day Col. Dodge held the council with the Kioways, Camanches, and the Wacos. The stream upon which the village is situated is a large branch of Red River, the water of which is as salt

as the sea, and the cliff near its banks contains mountains of salt rock which can be used without any preparation whatever.

Excuse this hasty and imperfect scrawl, and believe me to be with great respect yours truly,

To Col. R. M. Johnson.

[*From the Courier and Enquirer.*]

POLICE EXAMINATION OF MATTHIAS.—The examination of this pretended prophet took place yesterday, and concluded in a short time. He strenuously denied the truth of Mr. Folger's allegations, that the money he obtained from that gentleman was got under false pretences, or that he was ever actuated in his conduct towards him by unjustifiable motives. He stated that he was born in the town of Cambridge, Washington Co., in this State, that he is 42 years old, and that his real name is Matthias. On being asked where his residence was, and what was his occupation, he replied:

I am a traveller, and my legal residence is Zion Hill, Westchester county; I am a Jewish teacher and priest of the Most High, saying and doing all that I do, under oath by virtue of my having subscribed to all the covenants that God hath made with man from the beginning up to this time. I am chief high-priest of the Jews of the order of Melchisedeck, being the last chosen of the 12 Apostles, and the first in the resurrection which is at the end of 2,300 years after the building of Jerusalem by Cyrus, and 1260 years from the birth of Mahomet, which terminated in 1830, that being the summit of the power of the false prophet; I am now denouncing judgment on the Gentiles, and that judgment is to be executed in this age. All the blood from Zaccharias till the death of the last witness, is required of this generation. That before this generation passeth away, this judgment shall be executed and declared. The hour of God's judgment is come!

Upon being asked whether he ever attempted to impress the mind of Folger with the truth of what he had just stated?—he answered:

In my general character as preacher, I endeavored to impress all men with the import of what I have here stated, but not more so in relation to Mr. Folger than any other person.

He was then asked whether he had ever told Folger that he possessed the power of life and death, the remission of sin, and the salvation of the soul, and that if he, Folger, believed in him he would be saved, and if not, that he would be damned? to which he responded:—In my character of preacher I say, that my person is as a trumpet, for the spirit of truth to speak by; and that this spirit the trumpet declares, that every person must believe in the said spirit of truth, and practice obedience thereto, as did Jesus of Nazareth; and that this obedience will secure eternal life. My general declaration was, that if they believed in the spirit of truth, they would be saved; if not, eternal damnation awaited them; and that the spirit of truth, which actuates them, must be directed from themselves and by themselves. To the question whether he had ever received money or property from Folger, and if so, what amount of money or description of property, he answered: In my general character of preacher, I declare to all men, that I will not accept any thing from them as of their property; but if they have any property in their possession which they believe to be God's property, then they are at liberty to give to me whatever they please of that property, and this is the only way in which I receive donations from any person whatever.

On being questioned if he recollected having received from Folger, or any of his family, sums of money in gold, and if so, to what amount, and in what description of coin, he replied:—"Mr. Folger and Mr. Pierson repeatedly declared to me, that they believed I was the Father, and fully qualified to establish God's kingdom upon earth, and in conjunction with them I erected the establishment on Zion-Hill, for which purpose they furnished money from time to time. As the Father, I had control over the funds, and in the progress of the establishment various monied transactions took place between us, in which we mutually accommodated each other. Mr. Folger on several occasions furnished me with sums of money in exchange for bank notes of his own. I have no particular recollection of the five twenty dollar bills mentioned in Folger's affidavit, and believe it to be a mistake of his. I once received bank notes from him to the amount of $2700, and at various times other sums, which I cannot remember. The general fund for the establishment of Mount Zion, and for the house No. 8 Third street, wherein Mr. Folger resides, amounted to ten thousand dollars, including a mortgage on that house to secure to Mrs. Folger about five thousand dollars, her separate estate.—This sum is exclusive of about a thousand dollars, expended in furnishing those two establishments, the bills for which Mr. Folger has in his possession. After Mount Zion had been established, and after the transfer of the property to me as the Father, some difficulty arose and a bill in chancery was filed against me, and I was required to give security for ten thousand dollars; but, to avoid further trouble, I re-conveyed the property. The house and lot in Third st. were to have been conveyed to me in the same manner, and Mr. Pierson had actually given orders for the conveyance to be made out, but he died before it could be executed. I have nothing further to say at present. Whereupon the magistrate committed him for trial.

☞ See page 6 2

Since the above was in type, we have received the following caution:

TO THE PUBLIC.

I had intended, by the advice of several judicious friends, not to have noticed any of the statements of the Impostor Matthias, or the wild rumors growing out of the delusion I have been under in reference to him; but as the statements made by him in his examination before the Police yesterday, as published in the morning papers, are calculated to injure me seriously, I think it best to deny those statements, the object of them with Matthias being, no doubt, to crush me if possible. I have no objection that Matthias, or any one else, should state the *whole truth* in reference to any transaction of mine, but that which is untrue, I must protest against, and when necessary, meet and refute.

Matthias stated in his examination yesterday, that on one occasion he received from me $2,700: this is true, as far as it goes—but the whole truth is this—that early in the present year I sold a property, for which the party paid me about three o'clock—too late to be deposited in the Bank that afternoon. I was going to Hartford that afternoon in the steamboat, and fearing to take it in my pocket, I left it in his charge for safe keeping until my return, which was in about forty-eight hours; so that he did in fact *receive* $2,700 from me, and kept it until I returned, when I received it again from him.

The statement about a mortgage of $5,000 either on my place at Sing Sing, or any other property to secure that sum to the estate of Mrs. Folger, is totally untrue. No such mortgage was ever given.

As it regards Mr. Pierson having directed that a deed of Third street property should be given, it is entirely new to me—and he is not living to state what he did say to Matthias. I know nothing about it, but I do not think he ever directed it, for the simple reason that when he is said to have done it, I was largely in advance to him in joint speculations, and he knew that I felt no disposition to be any more so. All I ask of my friends is to be cautious in receiving the statements of this deceitful creature, and leave me to manage all my concerns with him. To all who are interested, I can exhibit a perfectly clear statement of my concerns, and satisfy them that I have and shall act uprightly with all men.

BENJAMIN H. FOLGER.

☞ Such papers as published the police report, will oblige me by publishing this.

Married, lately, by the Right Rev. Bishop Luscombe, at the English Embassy, and subsequently by the Abbé Le Cointre (under a dispensation from the Archbishop of Paris,) Prince Louis Stanislas Rotska de la Trémouille, to Auguste, the eldest daughter of the Hon. Col. Alexander Murray, (of Frimley, near Bagshot, England,) and grand-daughter of John, late Earl of Dunmore. The bride is descended in a direct line from that Countess of Derby, whose defence of Latham Castle rendered her so conspicuous during the time of the Commonwealth, which Countess was the daughter of Claude, Duke de la Trémouille, and the Princess Brabantia, the youngest daughter of William, of Nassau; whose eldest daughter had married Frederick the Fourth, Elector Palatine, the grand-daughter of whom intermarried with Ernest-Augustus, Elector of Hanover; from whom the present Reigning Family in England are descended; consequently the bride and bridegroom stand in the same degree of consanguinity with the illustrious House of Orange, as does his Britannic Majesty, William the Fourth. The bride's aunt, (the Lady Virginia Murray,) together with her father, and her younger sister, Virginia, were present at the ceremony.

[From the London Christian Observer.]

THE MORAL OF FLOWERS.

THE WILD WALL-FLOWER.

What various turns of chance and fate
This mouldering pile has known!
What wide magnificence and state
Within its halls were shown,
When crowds of knights and ladies gay
In weeds of peace kept holiday!

These walls, where now with softening grace
The ivy-wreath is flung,
With trophies once of war and chace
Were thick and proudly hung;
But helmet, spear, and horn, are gone
To augment the dust we tread upon.

Full oft this cell in weary thrall
Hath lonely captive held;
And these proud towers the whizzing ball
Like granite rock repelled;
But, ah! they fall and crumble now,
Beneath a stronger, mightier foe.

Time, Time, his withering hand hath laid
On battlement, and tower,
And where rich banners were displayed
Now only waves a flower.
List, and 'twill fitting comment read
On revel gay and martial deed.

Mute is the warden's challenge, mute
The warrior's hasty tread;
And tuneless is the lady's lute,
For she is with the dead;
And but a flower now mourns the doom
Of prostrate strength and faded bloom.

Read, stranger, in this ruin's fate,
An emblem true of life;
Conflicting passions—love and hate,
Joy, sorrow, fear, and strife—
Combine, alas! in one dark plan
To storm the citadel of man.

And should they fail, a foe is near
Who ne'er defeat hath known,—
Time ever follows in the rear:
He wills—the work is done;
For where's the beauty, strength, or pride,
Hath e'er his withering touch defied?

Wear'st thou to-day the wreath of fame?
Oh heed it, heed it not;
A few brief years, thy place and name
May be alike forgot,
And but a lowly floweret wave
Upon thy unremembered grave.

Here ends the semblance. Never more
This ruined pile shall rise,
But man a seraph blest shall soar,
When what is mortal dies,
If while earth's changing path he trod,
His heart and hopes were fixed on GOD.

THE PRIMROSE.

Fairest of all that's fair
In nature's works, are ye, ye wilding flowers,
When thus at Spring's first beck ye blithely rear
Your shining heads to herald her bright hours.

But that your bloom is brief,
And here and there, on some slight stem a thorn,
Half hid perchance, beneath a shriveled leaf,
Tells unto what sad destiny ye are born.

I could have thought the doom
Which gave to ruin earth, to storms the sky,
And man, God's last best work, unto the tomb,
Your primal beauty had unharmed passed by.

But are ye loved the less,
Than for our sakes these earth-born traits ye wear?
Oh, no! the very blight that mars your grace,
And speaks your frailty, makes ye but more dear.

Nor this your only claim
On man's regard; meekly from glade and bower
Ye warn and counsel him, as 'twere your aim
To win him back to Paradise once more.

Yes, each of ye in turn
Paints some pure moral to the human heart:
One bending 'neath the storm, to those who mourn
Lessons of meek endurance may impart.

Others that breathe at eve
Sweet incense, urge to watchfulness and prayer.
And with united voice *all* bid us leave
The morrow to our common Father's care.

And thou, so fair and pale,
That lovest midst grass and shadowing leaves to hide
Thy modest charms, sweet Primrose,—thee I hail,
Reprover meek of vanity and pride.

Alas that pride, which wrought
Man's woe in Paradise, should haunt him still;
No hated inmate, but with every thought
Twined, closely twined, and prompting aye to ill.

Oh, when within my breast
Such thoughts are stirring, do thou gently chide,
And timely whisper from thy leafy nest—
"Shall man be proud, to sin and death allied?"

THE PASSION FLOWER.

Oh, ne'er with cold and careless glance gaze I on thee, sweet flower;
Nor careless pluck thee, as I'm wont thy sisters of the bower;
No; fancy gifts thee with a spell unknown to all beside,
Which checks the hand thy beauty woos, and quells the glance of pride.

Each flower some fairy legend owns, to joy or sorrow dear,
Or simply beautiful, just such as wins gay childhood's ear:
But both to aged and to young, from cot to lordly hall, [thrall.
Thou, thou hast that to tell shouldst hold each human heart in

Each flower some chosen emblem is: one is for beauty's bloom
Another friendship claims; a third sheds fragrance o'er the tomb;
But linked with holy memories, to penitence how dear!
Thy shrine is aye the broken heart—thy dew, contrition's tear.

Would such shrine could offer thee, and on thy pale leaves shed
Those sadly sorrowing tears which fall but when the heart has bled!
But ah! like sealed font, that heart withholds the tribute due,
Though lesser sorrows find it still to gentle pity true.

Yet dear I hold thy sacred lore, and oft with curious eye
Do trace the mystic characters which in thy bosom lie;
Types of those fearful instruments of agony and scorn,—
The cross which bore the Lord of life—the nail, the twisted thorn.

And now of many a cultured flower, and many a wilding spray,
I've sung, but thou the fittest seem'st to grace my closing lay;
Then come, and round my simple harp thy wreaths symbolic fling,
Lest meaner theme again should wake its consecrated string.

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 567.)

CHAPTER II.

ON THE ILLUSTRATIONS FROM MECHANICS.—The illustrations from Mechanics may be carried too far. Peculiar properties of life in the body. They differ in quality. They have an adjustment to each other more admirable than the mechanical connection.

We are the more desirous of entering upon this subject, that we may prevent the reader from founding a false conclusion upon the very mode in which we have hitherto proceeded, that of showing design in every part of the animal structure by taking our illustrations from the mechanism of the body.

When we have admired the connections of the several parts, or organs, thus made manifest by comparison with machinery, we may go too far, and say that the material structure and mechanical relation are to be found in still greater minuteness and perfection in the finer textures of the body—proceed to call this organization, and erroneously conclude that, out of organization, comes life. The very term organization misleads, yet it implies something constructed in which one part co-operates with another, but nothing more. Taking the body as a whole, there are undoubtedly instances of such co-operation, but it is in vain to seek the explanation of life from this, since life exists in simple and uniform substances, where there is neither construction nor relation.

Now, although there are mechanical construction and relation, as we have seen in bones, muscles, and tendons, the phenomena of the body result from a dependence established among the living properties, not the mechanical. The highest medical authorities have seen reason to conclude, that life is an endowment not resulting from organization or construction, but, on the contrary, producing it; in other words, that the living principle attracts the new matter, arranges it, and, in order to its continuance and perfection, alters it, and effects a continual revolution in it. For there is nothing more curious than the uninterrupted and rapid change of the material of the animal body, from the first pulse of life to the last breath that is drawn, of which we shall give abundant proofs before we close this inquiry.

In first approaching the subject we are blinded by familiar occurrences, and cannot comprehend all the links by which the visible phenomena of the living body are produced. Probably most of our readers believe motion to be a necessary consequence of life, and the very proof of its presence. The peasant stirs up an animal with his staff, and if it does not move he is satisfied that it is dead; and such is the experience of mankind. We do not reflect that many different qualities of the living powers must be exercised before sensibility is shown in its visible sign, the motion of the creature. It is not necessary that the parts shall lock into each other like the cogs of wheels; the connections established are of a different kind altogether. Each part possesses a property of life entirely distinct from the other, and this property of life may exist in the individual part (for a time at least) without that co-operation of the whole which is necessary for the motions of the animal.

This quality of life is, in one respect, like gravitation in matter; that is, when the mass is broken into parts, each division has its proportion of the endowment, and so the separated parts of a living creature possess life. But here the resemblance ceases: gravitation is the same quality in every part, and uniform in its effects, whilst the life is exhibited by qualities differing in every part of the animal body. Did these parts possess qualities exactly similar, they would remain at rest, and, though combined, they would not influence each other. It is the different powers brought into combination that produce the motion of the whole animal.

If a man fall into the water, and is dragged out motionless, and has ceased to breathe, each part of his body may still possess its property of life. Although the combinations have been destroyed, he may be revived by exciting action in some part of his system. Life still remains in his brain, and nerves, and heart, and arteries, and in the muscles, which should enable him to breathe; but the mutual influence, the bond of their united operations, is broken. We may take the analogy of a machine, and say that the wheels are stopped; but this is, in fact, a very different thing; it is the operation of the living influence that is stopped, for we repeat that nature, (by which, of course, is always to be understood the Author of Nature,) has combined the organs not mechanically, but by properties of life.

Artificial respiration draws after it the action of the heart, because the sensibility of the heart is made respondent to the lungs Pulsation of the heart, excited by the motion of the lungs, is followed by the action of the arteries; these organs, in operation, drive the blood through the frame, and, by the circulation, the susceptibility of each part to impression, which had been weakened, is restored. Action and re-action are re-established; but these actions are not like those of a machine, they are living properties; sensibility in one part, contractility in another; and after a variety of these internal sensibilities have been for some time in operation, the man gives outward token of recovery.

So a person recovering from fainting, after sobbing and irregular breathing, has the respiration renewed; in succession other parts recover their sensibility, and resume their places in the circle of relations; the skin is capable of being stimulated, and the limbs are capable of motion; the eyelids are opened; by and by the nerve of the eye is sensible to light, and the nerve of the ear to sound; and finally, the faculties of the mind are roused, and its control over the body re-established. The whole separate endowments of life in the different parts resume their offices; the last in the train; only the property of the muscle to contract is alone observed by the uninformed, and voluntary motion is the token of entire restoration.

We can imagine a half-learned person to act very foolishly in the attempt to restore the apparently drowned. He has been told that we draw in vital air, and breathe out what is unfit to support life; he imagines that it can be of no use to distend the lungs of the drowning person with his own breath, and precious time is lost. Whereas, the mere distension of the chest, that is, of the lungs, followed by the compression of the chest, and again by the distension, and so on alternately, is the *play of the lungs*, which by sympathy draws the heart into action, and in succession all the vital organs. This is not what chemistry teaches: chemistry shows us that the vital air influences the blood; and it is true that the blood, being refreshed or impregnated with the vital air, renews the properties of life. But this effect on the blood could never take place unless there were some previous consent or sympathy, putting the organs into operation. We repeat, that the consent of organs is not the effect of mechanical adaptation, or of chemical action, but of relation established among the vital properties.

If a man be struck by lightning, he has not merely the vital operation of respiration stopped, as in the case of the drowning man, in whom every organ continues to possess its property of life; he is not like a man struck on the head, where one vital organ is so disturbed that the circle of vital actions is broken; in this instance the electric fire passes through every fibre and every organ—all the qualities of life, whether residing in the brain, nerve, or muscle, are instantaneously destroyed, and the moment of death is the commencement of dissolution.

Mr. John Hunter illustrated this somewhat familiarly. If you bruise the head of an eel, its body writhes; but if it be taken by the tail, and struck on the flag-stone, so that every part of its body receives the shock, then all the parts are killed, and it remains motionless. When an animal is killed by that violence which injures one important organ, the property of life remains for a certain time in every part; those parts have no correspondence, and there is no outward token of life; but the vital principle is still capable of exhibiting one of its most important properties—it arrests the operation of those chemical affinities which belong to dead matter.

Thus the reader perceives, that, although he be led on to comprehend the design or intention manifested in the structure of the body by mechanical instances or comparisons, it is when we contemplate the influence of the living principle, that we have a higher conviction of the Omnipotence, which has formed every creature, and every part of each creature, with that appropriate endowment of life which suits it to act its part in the general system.

We must learn to distinguish between the death of the animal, and the death of the parts of the animal—between apparent death and dissolution, or the separation of that quality which distinguishes living matter.

Viewing the subject generally, as Mr. Hunter said, there are not two kinds of matter, but two conditions of matter. It is at one moment forming beautiful combinations, as in the flower, through the principle of life, and, at another, it is cast away as noxious, undergoing changes by decomposition, from chemical processes solely. The want of combination in the whole animal body exhibits apparent death. The loss of life in all the parts of an animal body is absolutely death, and the material becomes subjected to the influence of the chemical affinities, instead of being urged into motion by life.

The jackstone produces motion in one part of a machine; that, varied by mechanical influence, is communicated to a second; from the teeth of one wheel it is communicated to the corresponding leaves of the pinions, and from the pinions to the fuses. But what a base notion it is to suppose that

the mere property of weight in the jackstone is like the influence of life!

The weight is the power, in the language of mechanicians; but it does not reside in the parts of a machine, nor does it exhibit different qualifications in these parts. Separate them, and they are nothing. On the contrary, no one part of an animal body is in this matter dependent on another for its property of life. The property is inherent in the part itself, and the wonderful thing is that each property in the several organs corresponds with the others so as to form a circle of vital operations. There is no transmission of power, in all this, from part to part—no train of connection to be traced as from the jackstone, or the spring, along the parts of the machine. There is therefore, in truth, no resemblance between machinery and the influences in operation in a living body. What is to be admired in a living body is not merely the adaptation of bones, muscles, and tendons, forming a mechanical apparatus, but rather the different qualities which life bestows upon different parts; these qualities put the parts into relation, each according to its place in the circle of the economy; and among innumerable properties of life in the individual parts, produce that perfect co-operation as if one principle only actuated the whole.

When a person moves under the direction of the will, nothing can be more simple to our understanding, because we do not attempt to trace the links, far less to estimate the powers in the several parts influenced during this familiar action. But if there be the slightest diminution of sensibility of one nerve, so that it shall not transmit sensation, or if there be any disturbance which retards in the least degree the transmission of the will along another appropriate nerve—if the muscle be benumbed, or have lost its irritability—if the action of the blood vessels has been either diminished or increased beyond their ordinary course, either in the organs of sense, the brain, or nerves,—we are appalled by the consequences. The impressions of things are not felt; the senses are unexercised; the limbs remain inactive; one half or the whole, of the body is a load, as if there were a living being in a dead body—a body whose parts refuse their office—appearing dead, though they are not so. The correspondence of their living qualities has alone been disturbed; the movement which results from the whole is stopped, and there is apparent death.

What confusion then must be engendered in the minds of those who would confound the phenomena of life, as presented in the entire frame-work of the body, with those separate qualities of life, which, residing in the several parts, must enter into combination for the motion of the whole!

The next step of this unphilosophical manner of treating the subject is to make the organization the source of the living property,—as if any combination of organs could produce life,—as if those organs could have motion without the distinct endowments of life in their separate parts,—as if they co-operated mechanically, and not from the correspondence among their living properties. Those who thus reason mean to say, that parts are made so finely as to move of themselves, one part propelling another, and the motion of the whole producing life. It is quite clear, that this confusion of ideas arises from contemplating the phenomena of the perfect animal, in which all intermediate influences are confounded. On the other hand we present this proposition.

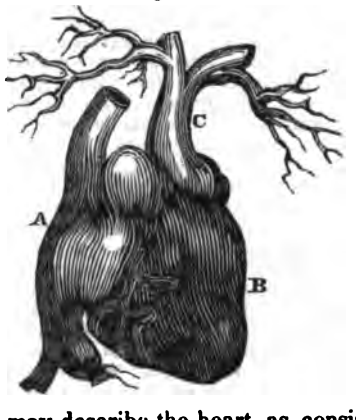
The several *simple* substances of a living body have each an endowment of life bestowed upon them. Let us take the obvious qualities, of sensibility—the power of transmission—and the power of motion; each of which is appropriate to a particular substance. When these qualities are put in relation, impressions may produce motion, and thus there are three distinct properties of life brought into operation. Where is the organization or construction here? Without those living endowments, these parts would be inoperative, in whatever juxta-position placed. The mechanical construction of the body is one thing,—and we are able to admire it, because it can be illustrated by comparison with our own contrivances; the combination of living properties is another and an entirely different thing.

We here reach the limit of philosophical inquiry. Hitherto all has been flattering to the pride of the creature, but we must now humbly acknowledge the inscrutable ways of the Creator; and ceasing to trace the origin of life more than we do that of gravitation, we should be occupied in observing its laws, not in exploring its source.

We shall take an instance to illustrate the difference betwixt the mechanical connection of parts and their relations through the living properties; and it will, at the same time, show how curiously the living properties and the mechanical properties are made to correspond with each other.

A stream of water is converted into a mechanical power: it fills a cistern, which is attached to a lever; the cistern descends by the weight of water; by its descent a valve is pushed open; the water escapes, and the cistern ascends, and remains so till the stream flowing into it again depresses it. Thus the regularity of the supply of water gives regularity of motion to the machine. Compare this with the heart.

Fig. 23.



We may describe the heart as consisting of two cavities, the one called the *Auricle*, and the other the *Ventricle*. The sinus A, (fig. 23,) receives the blood returning by the veins; and gradually filling, like a cistern, it becomes so distended that its muscular power is excited; it contracts, and delivers the blood with a sudden impetus into the second cavity, or the ventricle B, which, in its turn, excited by the distension, contracts, and propels the blood into the artery C. Here the action of the heart is accounted for, by its mechanical distension with the blood; and the regularity of its motions necessarily correspond with the regularity of the supply. The distension produces action, and the propulsion of the blood from the cavity allows a momentary state of rest, until another volume of the blood excites another pulse.

But we have now to observe, that when this irritability or muscular power was bestowed upon the heart, it was directed by a law entirely different from the irritability as possessed by other muscles. A property of alternate activity and rest was given to it, quite unlike the contractility of other parts; and accordingly, when the heart is empty, when there is no distension of blood at all, the two cavities will continue their alternate action. Nay, if the heart be taken from the animal recently dead, it will continue to act in regular successive pulses, first the one cavity, and then the other, and so on successively for a long time, until the life be quite exhausted. The two cavities will thus continue in alternate action, as if they were employed in the office of propelling the blood, when there is no blood contained within them. It is superfluous to observe that no such thing could happen in the case of the cistern and lever, were the stream of water to cease running.

Thus we distinguish two things quite different: a mechanical or hydraulic provision, by which these little cisterns, the auricle and ventricle, shall be regularly supplied, and alternately filled and emptied—and the property of contraction in the heart, not a mere property of contraction from irritation, as in the other muscles, but a property far more admirable, since the irritability or power of contraction of the part is ordered with a reference to its office—that it shall contract and relax in regular and rapid succession, and continue its office unweariedly through a long life. The living property of the heart exhibits a variety adapted to its office, and a correspondence still more admirable than the mechanical relation. We are thus particular in distinguishing the mechanical adaptation of parts from the co-operation of the vital influences residing in the several parts; for there are many who will take the illustration from mechanics, and stop their inquiry there, and who entertain a confused notion of the dependence of the life of the body on its mechanism.

Another mistake which some philosophical inquirers entertain, is to fancy that the principle of life is of a galvanic nature. There is, indeed, an unwillingness in men to acknowledge that their powers of reason are exhausted, and that they have arrived at an ultimate stage; they would fain set up some contrivance to hide the humiliating truth. Whatever notions have prevailed in the schools at different epochs, of heat, electricity, or galvanism, we find an attempt to explain the phenomena of life by an application of the powers with which they have been successful in their physical inquiries. Experiments without reason are equally delusive with hypotheses; those who will not give themselves the labor of thought, desire to witness striking phenomena; wonder-struck, they believe that they are engaged in experimental investigation, when their state of mind is little better than idle amazement. A calf's head is made to yawn, or a man cut down from the gallows to move, like a figure of cards pulled with strings; the jaws move, and the eyes roll, and this is done by conveying the galvanic shock to the nerves; here it is supposed that nothing

less than the principle of life itself can work such wonders, and that galvanism is this principle.

Putting aside the circumstance already stated, of life exhibiting totally different phenomena in union with different parts, is there any point of resemblance between galvanism and life? Does tying the nerve stop the influence of galvanism as it does the influence of life? Does galvanism course along a cord when it is surrounded by matter in contact with it of the same nature? can life pass out of one body into another, like heat, or electricity, or galvanism? Can *they* be contained by a thin membrane? Does life pass equally through all the parts of a moist animal body as one uniform influence, like galvanism?

In no circumstance is there a resemblance, and the whole phenomena resulting from galvanism transmitted through an animal apparently dead, are fairly to be attributed to its being a high stimulus conveyed through the moist animal body, and exciting the powers which remain insulated in the several parts; and in exciting those forces, far from renewing them, it exhausts them altogether.

The uses made of galvanism, in the explanation of the living phenomena, should make sensible men very cautious how they carry the legitimate inductions of chemical science into another department. They will not submit to call the irritability or contractility of a muscle an endowment of life, but seek to explain it by organization. They employ the microscope; they find the ultimate fibre to be some thousandth part of an inch in breadth; they see plicæ or folds; they imagine them to be cells into which the fibres are divided; they furnish these cells with two different gases, and explode them by some galvanic influence of the nerves; and the explosion, by dilating the cells in one direction, causes the contraction in another. This is the theory of muscular action at the period of the discovery of the gases; and some such idle hypothesis, supposed applicable to the laws of life, accompanies every considerable improvement in chemistry.

In the most modern and the most popular French work on Physiology, by M. Richerand, he says, "What appears to me by much the most ingenious opinion, and which carries with it the greatest probability, is that which supposes the contraction of the muscle to depend on the combination of hydrogen, carbon, and azote, and other combustible substances which exist in the fleshy fibre, with the oxygen conveyed to them through the arteries." But he adds, 'as if he had perfected the theory,' "it is also necessary to suppose, that a nervous fluid is directed through the muscle to determine the decomposition, as the electric spark forms water out of two gases."

Such is the chemical theory of muscular motion; it betrays an entire misunderstanding of the phenomena of muscular motion, and of the beautiful provision in every muscle for its appropriate office. The muscles, which are subservient to the organs of sense, differ in their operations altogether from the voluntary muscles of the limbs. The hollow muscles, as they are termed, those which carry down the food, and which carry round the blood in circulation, vary in their time and manner of acting according to their offices; but what conception can he have of such adjustment of powers, who is entertaining himself with a theory that supposes a sudden explosion to take place in the fibres of the muscle at their time of action? Inductive reasoning, which has carried men to the highest acquirements in physical science, is here laid aside; conjectures totally inconsistent with the phenomena of life are employed in its stead, and the useful philosopher becomes a very indifferent physiologist.

FOREIGN INTELLIGENCE.

LATEST FROM EUROPE.—The *Napoleon* packet of 24th, from Liverpool, arrived yesterday. The London dates are to the 23d. There is little of interest by this packet. The Spanish question remains, to all appearance, *in statu quo*, though, in such a case, the fact that no enthusiasm is displayed, and no progress made, in the cause of the Pretender, is certainly indicative of his ultimate defeat.

In France the Chamber of Deputies had been prorogued till December, without, we are sorry to say, having made any provision to carry into effect the treaty of indemnity with the United States. Considering the decisive majority which the King's government has in the Chamber, the urgency of the claim, and the circumstance of the rejection by the late Chamber of the requisite appropriation for the indemnity, we cannot but think, that although the Chamber was not convened for the despatch of general business, this subject should have been submitted to it by the King's Ministers. This does not appear to have been done. As the Chamber will not meet again before the newyear, it seems too probable, at the next session of Congress, beginning on 1st December, and terminating on 4th March, that as no satisfactory information can be given them respecting the state of this question, they may feel bound to resort to some retaliatory measures of a commercial nature.

In England the proroguing of Parliament has induced a pause in political discussions.

The Cholera has re-appeared in Dublin with great virulence.

From Portugal there is nothing of interest.

The Bordeaux papers of the 18th inst, contain little that is interesting from Spain, the accounts relating principally to the movement of the adverse parties at a period anterior to the intelligence received by telegraph. The following are the only paragraphs worth extracting:—The war continues to be marked by deplorible ferocity, not to speak of the fusillades of the people by order of Zumalacarregui. This chief, for the purpose of punishing the little town of Valcarlos, for its refusal to aid his party, has ordered the authorities to pay him the sum of 24,600f., or four muskets for each male inhabitant. Determined not to comply with either of these conditions, and dreading that the town should be set on fire, as had been threatened, they have adopted the plan of tranporting all their valuable property to the frontier, even to the doors and windows of their houses. After having taken this precaution, the Alcade wrote to the chief of the rebels, that he might come, adding, that he would not only be received by musket-balls, but that the convent of Roncesvaux would be burnt in retaliation. Within these few days Zumalacarregui has caused three of his officers to be shot for having attemped to seduce his soldiers in favour of Rodil. It is said that the young men of Roncal are well disposed to the Queen, and offer to enter into her service. To complete the measures of *surveillance*, the object of which is to prevent the supply of arms or ammunition to the Spanish Carlists, although English and French cruisers are established on the coast of Biscay, orders have been given for the march of two companies of the 44th to La Teste and to Royan."

[*From the Journal des Debats of Thursday, 23d.*]

CONSTANTINOPLE, JULY 28.—The insurrection in Syria assumes a very serious character. Ibrahim Pacha will find it difficult to maintain himself in that province; almost the entire of the population, but particularly the inhabitants of Mount Lebanon, have joined in the revolt. Ibrahim is concentrating his forces with a view to put an end to it at one blow, but he has to contend with a warlike people, from whom he will meet with a much more formidable resistance than that opposed to him by the Turks in Anatolia. The Porte, though well informed, remains inactive, and appears determined to await the result. Ibrahim has applied to his father for immediate relief; the latter has consequently embarked several regiments for Syria, whither he intends to repair in person. This intelligence has produced here a very great sensation—the whole of the suburb of Pera is in movement, and couriers are despatched in every direction.

The occupation of Syria is a vital question for Mehemet Ali; if he loses that province he will have to relinquish all his future plans of aggrandizement, and, perhaps, forfeit his independence. It must, nevertheless, be confessed that he disposes of powerful means to maintain himself in that possession. But let him be successful or not, he must abandon the system he has heretofore followed, and cease to treat his new subjects like slaves. It is said that those events have been brought about by European intrigues. The Ministers of England and France are alive to them, and follow them with interest: they sent off couriers this evening.

The Sultan has recovered a certain degree of confidence, and the intrigues afloat in the Divan for the purpose of detaching him from Russia have now less chance of success than ever The Sultan often repeats his favorite saying—"I know what I now have, but I know not what I should have were I to listen to those who wish to make me fall out with Russia. I prefer a certainty to an uncertainty; I found a friend in Nicholas, and am not aware of what benefit I should derive from the friendship of those who offer me theirs."

Letters from Constantinople state that the British fleet on the 20th July was cruising off the Dardanelles, and that the plague was raging with great violence at Constantinople.

MR. O'CONNELL AND AMERICA.—On the 1st ult, a great public dinner was given in London in honor of the abolition of Negro Slavery. The Earl of Mulgrave, late Governor of Jamaica, was in the Chair, and among the numerous company were many members of Parliament. Several speeches were made, from the newspaper notice of which, we copy the following:

"Mr. O'Connell was loudly applauded. He congratulated the meeting in eloquent terms on the glorious event they were met to celebrate, and the pledge given them by a liberal and enlightened Administration that the good work should be perfected. Yesterday slavery was a fact; to-day a memory.—(cheers.) He certainly had not been one of those who approved of the twenty millions grant (hear!); but his objection arose from no feeling of stinginess, but from a feeling that man was not an "article" to be bought with money; but he was glad the act had been done, the price was nothing compared with the principle (cheers.) The Honorable and Learned Gentleman took occasion to exclaim against the Americans for keeping up the system of slavery; it was mere hypocrisy for them to boast of liberty and the rights of men, while they kept their fellow men as slaves (cheers.) He again congratulated the meeting on the glorious revolution which had this day turned 800,000 slaves into men. He concluded by proposing as a toast—'The total extinction of slavery all over the world.'"

[*From the London Times.*]

The funeral of the poet Coleridge took place on Saturday, in the most private manner. Several of his admirers and literary friends wished to attend, but his immediate connections, aware of the opinions of the deceased against ostentation and display of any kind, declined the offer. The following notice of this remarkable writer appears in the Athenæum of Saturday:—"We have to record the departure of another mighty spirit from among us—the quenching in the darkness of the grave of another of the few bright stars which yet remained to us. We have it not in our power to offer any detailed biographical notice of Mr. Coleridge. That he was born at Bristol, educated at Christ's Hospital, studied at Jesus College, Cambridge, and accompanied the late Sir A. Ball to Malta as secretaty, are facts which are already public. His tour to Germany (accomplished through the liberality of the Messrs. Wedgwood), his residence at Nether Stowey and at the Lakes, his marriage, and the birth of his children—his labors in the Friend, the Watchman, and the Morning Post—his residence during the latter years of his life at Highgate—are things so well known to the greater num-

ber of our readers, that they call for no particular mention on this occasion. His life was one of precarious fortunes, the consequence of those singularities of character, temperament, and habits, which grew out of his original and peculiar genius. Those who have read his Biographia Literaria will not forget his account of his journey to solicit subcriptions for his Watchman, nor his extraordinary harangue against periodical literature in the house of one for whose patronage he was then soliciting. It was a type of the man—a sure token that in the hard business of life—its strivings, and its amassings, he could not be successful. Another anecdote of him, no less characteristic, may not be so generally known. We have reason to beleive, that during the early part of his life he enlisted as a common soldier in the Dragoons; of course he did not remain long in the service. Perhaps his then democratical principles made his officers willing to get rid of him—perhaps (which is a fact) because he could not be taught to ride."

The balloon which was to start on Sunday from the Champ de Mars for London, to set down no less than 17 passengers in Hyde-park, after an ærial voyage of three or four hours, met with an accident which prevented its ascension, to the great disappointment of several thousand persons, who had collected to the spot to witness its departure; but more especially of the seventeen passengers, who had bespoken and paid for places to perform the voyage.

The balloon burst soon after it had begun to fill; but it is said that its constructors will lose no time in preparing a new one, upon the most improved principle, in which they hope to effect their original purpose of landing a cargo of passengers in the very centre of our Hyde-park. We confess we are somewhat incredulous.

THE LIFE AND CORRESPONDENCE OF HANNAH MORE, which it is said the Harpers have in press, cannot fail to be one of the most attractive books of the day. Her talents, the beauty of her character, and her intercourse in earlier life, about 1780, with the most distinguished society of London, literary and political, furnish rare and precious materials.

With Garrick and his wife she was most intimate, he was indeed one of her kindest, most cherished, and most valuable friends—and her grief at his death was proportionably great and sincere. His splendid funeral in Westminster Abbey, and the effect of it, are thus described by her:—

"We were no sooner recovered from the fresh burst of grief, than I cast my eyes, the first thing, on Handel's monument, and read the scroll in his hand, 'I know that my Redeemer liveth.' Just at three the great doors burst open with a noise that shook the roof; the organ struck up, and the whole choir in strains only less solemn than the 'archangel's trump,' began Handel's fine anthem. The whole choir advanced to the grave in hoods and surplices, singing all the way: then Sheridan, as chief mourner; then the body, (alas! whose body?) with ten noblemen and gentlemen pall-bearers; then the rest of the friends and mourners; hardly a dry eye,—the very players, bred to the trade of counterfeiting, shed genuine tears. As soon as the body was let down, the bishop began the service, which he read in a low but solemn and devout manner. Such an awful stillness reigned that every word was audible. How I felt it! Judge if my heart did not assent to the wish that the soul of our dear brother now departed was in peace. And this is all of Garrick! Yet a very little while and he shall 'say to the worm, thou art my brother; and to corruption, thou art my mother and my sister.' So passes away the fashion of this world. And the very night he was buried the playhouses were as full, and the Pantheon was as crowded, as if no such thing had happened: nay, the very mourners of the day partook of the revelries of the night;—the same night too!"

In another place she says, "I can truly bear this testimony to his (Garrick's) memory, that I never witnessed in any family more decorum, propriety, and regularity, than in his; where I never saw a card nor even met (except in one instance) a person of his own profession at his table."

The delight she derived from the performances of this great actor, may be judged by the following notice of his *Hamlet*:

In every part he filled the whole soul of the spectator, and transcended the most finished idea of the poet. The requisites for Hamlet are not only various, but opposed. In him they are all united, and as it were concentrated. One thing I must particularly remark, that, whether in the simulation of madness, in the sinkings of despair, in the familiarity of friendship, in the whirlwind of passion, or in the meltings of tenderness, he never once forgot he was a prince; and in every variety of situation and transition of feeling, you discovered the highest polish of fine breeding and courtly manners. Hamlet experiences the conflict of many passions and affections, but filial love ever takes the lead; that is the great point from which he sets out, and to which he returns; the others are all contingent and subordinate to it, and are cherished or renounced, as they promote or obstruct the operation of this leading principle. Had you seen with what exquisite art and skill Garrick maintained the subserviency of the less to the greater interests, you would agree with me, of what importance to the perfection of acting, is that consummate good sense which always pervades every part of his performances. To the most eloquent expression of the eye, to the hand-writing of the passions on his features, to a sensibility which tears to pieces the hearts of his auditors, to powers so unparalleled, he adds a judgment of the most exquisite accuracy, the fruit of long experience and close observation, by which he preserves every gradation and transition of the passions, keeping all under the control of a just dependence and natural consistency. So naturally, indeed, do the ideas of the poet seem to mix with his own, that he seemed himself to be engaged in a succession of affecting situations, not giving utterance to a speech, but to the expression of his feelings, delivered in the most affecting tones of voice, and with gestures that belong only to nature. It was a fiction as delightful as fancy, and as touching as truth. A few nights before I saw him in "Abel Drugger;" and had I not seen him in both, I should have thought it as possible for Milton to have written "*Hudibras*," and Butler "*Paradise Lost*," as for one man to have played "Hamlet" and "Drugger" with such excellence.

Of *Sir Joshua Reynolds* she thus speaks:

I wish you could see a picture Sir Joshua has just finished, of the prophet Samuel, on his being called. 'The gaze of young astonishment' was never so beautifully expressed. Sir Joshua tells me that he is exceedingly mortified when he shows this picture to some of the great—they ask him who Samuel was? I told him he must get somebody to make an Oratorio of Samuel, and then it would not be vulgar to confess they knew something of him. He said he was glad to find that I was intimately acquainted with that devoted prophet. He has also done a St. John that bids fair for immortality. I tell him that I hope the poets and painters will at last bring the Bible into fashion, and that people will get to like it from taste, though they are insensible to its spirit, and afraid of its doctrines. I love this great genius for not being ashamed to take his subjects from the most unfashionable of all books. Keeping bad company leads to all other bad things. I have got the headache to-day, by raking out so late with that gay libertine Johnson. Do you know—*I* did not—that he wrote a quarter of the *Adventurer*? I made him tell me all that he wrote in the 'Fugitive pieces.'"

Of *Johnson and Monboddo*, the moralist and the metaphysician, we have these two glimpses.—Speaking of Johnson, she writes:

"You would have enjoyed seeing him take me by the hand in the middle of dinner and repeat, with no small enthusiasm, many passages from the *Fair Penitent*, &c. I urged him to take a *little* wine; he replied, "I can't drink a *little*, child, therefore I never touch it. Abstinence is as easy to me as *temperance* would be difficult." He was very good-humored and gay. One of the company happened to say a word about poetry. 'Hush, hush,' said he, 'it is dangerous to say a word of poetry before her; it is talking of the art of war before Hannibal.' He continued his jokes, and lamented that I had not married Chatterton, that posterity might have seen a propagation of poets. The metaphysical and philological Lord Monboddo breakfasted with us yesterday: he is such an extravagant adorer of the ancients, that he scarcely allows the English language to be capable of any excellence, still less the French—he has a hearty contempt for that people and their language; he said we moderns are entirely degenerated. I asked in what? 'In every thing,' was his answer. Men are not so tall as they were, women are not so handsome as they were; nobody can now write a long period; every thing dwindles. I ventured to say, that though long periods were fine in oratory and declamation, yet that such was not the language of passion. He insisted that it was. I defended my opinion by many passages from Shakspeare, among others, those broken bursts of passion in *Constance*, 'Gone to be married!' 'Gone to swear a truce!' 'False blood with false blood joined!' Again, 'My name is Constance. I am Geoffrey's wife—young Arthur is my son, and he is slain!' We then resumed our old quarrel about the slave trade: he loves slavery upon principle. I asked him how he could vindicate such an enormity? He owned it was because Plutarch justified it. Among much just thinking and some taste, especially in his valuable third volume on the *Origin and Progress of Language*, he entertains some opinions so absurd that they would be hardly credible, if he did not deliver them himself, both in writing and conversation, with a gravity which shows that he is in earnest; but which makes the hearer feel that to be grave exceeds all power of face. He is so wedded to system that, as Lord Barrington said to me the other day, rather than sacrifice his favorite opinion that men were born with tails, he would be contented to wear one himself.

A more affecting incident of fidelity unto death, than that related by her in the following letter, we have never met with. Yet the hero was a negro and a slave!

"*Hamton*, 1782.

"The other morning, the captain of one of Commodore Johnson's Dutch prizes breakfasted at Sir Charles Middleton's, and related the following little anecdote. One day he went out of his own ship to dine on board another; while he was there a storm arose, which in a short time made an entire wreck of his own ship to which it was impossible for him to return. He had left on board two little boys, one four, the other five years old, under the care of a poor black servant. The people struggled to get out of the sinking ship into a large boat; and the poor black took his two little children, tied them into a bag, and put in a little pot of sweetmeats for them, slung them across his shoulder, and put them into the boat: the boat by this time was quite full; the black was stepping into it himself, but was told by the master there was no room for him, that either he or the children must periah, for the weight of both would sink the boat. The exalted heroic negro did not hesitate a moment. Very well, said he, give my duty to my master, and tell him I beg pardon for all my faults. And then—guess the rest—plunged to the bottom, never to rise again till the sea shall give up her dead. I told it the other day to Lord Monboddo, who fairly burst into tears. The greatest lady in this land wants me to make an elegy of it; but it is above poetry.

We conclude with some touches at the times that are full of spirit:

"Did I tell you that the Bishop of Chester's Sermons were out of print in eight days? I hope the age is not so bad as we took it to be; and yet it cannot be very good neither, when the strawberries at Lady Stormont's breakfast last Saturday morning cost one hundred and fifty pounds."

"As I do not go to Ranelagh, nor the play, nor the opera, nor sup at Charles Fox's, nor play at Brooke's, nor bet at Newmarket, I have not seen that worthy branch of the house of Bourbon, the duke de Chartres. I never heard of such a low, vulgar, vicious fellow. His character is—

Poltron sur mer,
Escroc sur terre,
Et vaut rien partout."

* * * * *

"I have been in town some days, but had not time to write before, because, as the Duchess of Gordon told the queen, ''tis nothing but frux, frux all day, and rap, rap all *neet*.'"

"———, 1785.

"Talking of politics the other night, Soame Jenyns said it sounded mighty pretty in an essay to talk of the governor of a free people; but when put into English, it only signified the governor of a people who would not be governed, which was the definition of the king of England."

"Boswell tells me he is printing *anecdotes* of Johnson, not his *life*; but, as he has the vanity to call it, his *pyramid*. I besought his tenderness for our virtuous and most revered departed friend, and begged he would mitigate some of his asperities. He said, roughly, 'He would not cut off his claws, nor make a tiger a cat, to please any body.' It will, I doubt not, be a very amusing book, but I hope not an indiscreet one; he has great enthusiasm, and some fire."

NEW-YORK AMERICAN.

SEPTEMBER 27—OCTOBER 3, 1834.

LITERARY NOTICES.

SKETCHES OF SOCIETY IN GREAT BRITAIN AND IRELAND; by CHARLES S. STEWART, author of a Visit to the South Seas, &c. &c., 2 vols. Philadelphia, CAREY LEA & BLANCHARD.—The author of these Sketches is a Chaplain in the United States Navy, whose "Visit to the South Seas" made him favorably known to the reading public,—especially to the more religious portion of it. The volumes now before us are of slighter character; and sooth to say, might have been unpublished, and the world not have missed them. They are composed of letters lightly and pleasantly written from day to day; which, though interesting enough to friends and associates, are hardly of the dignity or value, or novelty, to invite public attention: they are, too, in our eyes, liable to a greater objection, that of blazoning forth at full length the names of all the kind families, and all the members, male and female thereof, who entertained the writer. This we consider a positive breach of the laws of hospitality, and not at all the less a breach because Mr. Stewart only finds occasion to speak well of all. If praise may be awarded, so may censure: besides, it is positively disagreeable to private families to have their interior and domestic privacy exposed to all eyes.

As a specimen of the style of the work, we annex two sketches of eminent individuals, as they were seen at the Queen's drawing-room:

We were in good time, and among the first to arrive. The Duke of Wellington, however, was already in the room, and of course arrested almost exclusively our first attention. Time has laid his hand with distinctive marks upon him; and he has lost much, in face and form, of the imposing air and strongly marked character distinguishable in busts and portraits taken, at an earlier and more flattering period of his life and history. He is only of middling height, or very little above it, is not stout, stoops a little, and appears to be, what is, perhaps, best expressed by the familiar phrase, "old and broken."

Thinking of him only, as associated in my minds' eye with the image formed by hearing and reading of him when a school and college boy, fifteen or twenty years ago—kept up by representations since seen on canvass and in marble—the involuntary inquiry on a first glance was, "Can this be the hero of Waterloo, and the conqueror of Bonaparte?" Still it is evident that he has possessed a fine, commanding face, though, I should think, one never equal in its traits of genius to that which distinguishes the heads of a Washington and a Napoleon.

He was in conversation, at the time, with Prince Leiven, the Russian ambassador; and so slight was the impression made by his personal appearance, that, to my own surprize, I soon found myself standing with my back towards him, forgetful alike of his presence and his glory.

This may perhaps be accounted for, however, by the entrance, in the mean time, of Talleyrand from a private audience in the king's closet. We have just saved a sight of this prince of politicians and diplomatists. He is taking leave, the present week, of their majesties, for a visit to the continent during the summer; and, had we not now have met him, we probably never should. His looks are by far more indicative of the character he sustains in the world, than are those of Wellington; and, were we living in an age of superstition, he is just the face and figure to which, in sailor's phrase, "I would give a wide berth." A disfigured foot, a natural malformation, or an effect of the gout, would, in a darker period of the world' have confirmed the suspicion which a glance at his countenance might excite, that he had received aid, in the political game played by him through the last half century, from a quarter where few are fond of being on very familiar terms.

His countenance is sallow, deeply wrinkled, and imbedded in a large quantity of widely frizzled gray hair. As he moved slowly along, supporting his slender and feeble frame by a cane in one hand, in addition to the arm of a friend held by the other, and sank into a seat, as if exhausted by the interview of courtesy just had with the king. I could but think of his celebrated remark upon hearing of the retreat of Bonaparte from Russia,—"*C'est le commencement du fin!*" and mentally exclaim of himself, so far as this life and world are concerned, "*C'est le fin du fin!*

THE LIFE AND VOYAGES OF CHRISTOPHER COLUMBUS; BY WASHINGTON IRVING. Abridged by himself, for the Use of School. 1 vol. 12mo. New York: N. & J. WHITE.—We congratulate the schools and the scholars of our country, that this little volume has appeared. In about 200 pages 12mo. it comprises the substance of Irving's great work—great in every sense. It has been, we may say, rewritten by him, so as to adapt it to the capacity of children. It is divided into short and complete sentences, which are numbered in each chapter; and to these, questions are suitably framed. Mr. Irving's object in this abridgement is, while diminishing the volume, to retain the spirit, the substance, and, as far as possible, the phraseology, of the larger work. He has, in our judgment, succeeded admirably, and furnished a book that will scarcely be read as a task, by any child. It is a model of style, as well as replete with instruction, which it should discredit an American to be without.

THE DISTRICT SCHOOL; BY J. O. TAYLOR. 1 vol. New York: HARPER & BROTHERS.—We took occasion last week, when noticing Mr. Simpson's book on popular education, to refer to the work, of which the title is prefixed, as forthcoming. It is still unpublished, though we learn, that in the course of next week it will be ready. Meantime, having received a copy in sheets, we hasten to commend it to our readers by extracts, which will, we think, warrant us in claiming their approbation for it, as a volume of great value, both in its design and in its execution. The design is to show to parents the defects in the present system of common school education, and the mode of removing them—to impress upon teachers the high responsibilities of their profession, the qualifications it requires, and the immeasurable evils of ignorance, passion, and presumption, or either of them, on their part; and finally, to lay before the public a plain and unvarnished account of how lamentably deficient in all these respects, teachers, as now employed, considered, and paid—are, and necessarily must be—together with the suggestions of a sagacious and practical mind, as to the amelioration of the system in all its parts. The volume, consisting of nearly 300 pages, in a fine clear type, is divided into sections, each treating, under a separate head, of a particular branch of the subject. Sec. 1, for instance, is addressed to parents, and dwells upon the part which duty requires from them in the education of their children. It is a natural and able introduction to the whole subject. We can only, however, afford room for a short extract, where, after appealing to them as parents, and as Christians, to care for the proper education of their children, the author addresses them as patriots:

The education of your children, likewise, is a duty to your country. You are under the strongest obligations to prepare your offspring for becoming intelligent, useful citizens. A freeman must be an intelligent man; and this government, wise as it is, cannot make your children free, unless you first make them intelligent. You had better place your children in another land, where others will govern them, unless you prepare them for governing themselves. But, as you intend them to be members of this republic, which is based on intelligence, sustained by intelligence, and looks to intelligence for its protection and safeguard, you are under the most solemn obligations, if you love your country and value its blessings, to make your children intelligent. To permit a son unable to read to go to the polls, is as great an injury as you can do your country. It is, in fact, as far as his vote and influence go, as great a crime as you could commit towards these free institutions. In a despotic government ignorance is the best quality in the people, but a free government demands virtue and intelligence; it cannot prosper, it cannot *exist*, without them. Then, if you desire the perpetuity of your liberties, the equal rights and privileges of these free institutions, and the honor and glory of your happy country, educate your children; fit them for enacting, administering, and obeying their own laws. Unless you do this you are not your country's friend.

The next three sections are devoted to the qualifications of teachers, and are capitally conceived and executed. Then follow sections on the importance of Common Schools—on teaching as a profession—on the government and discipline of a school—on the responsibility of teachers—and on the teacher's Compensation. From this last mentioned section we make a long extract, because herein, after all, lies much of the difficulty of the whole case. Until common school teachers are elevated in public estimation, by being better paid, and treated with more distinction, there is little hope of improving the scholars. On this head our author thus emphatically speaks:

If parents would give teachers a higher compensation, it would encourage young men to qualify themselves for instructing. In the United States men pursue science and literature for a livelihood. There are but very few whose circumstances are such as to permit them to seek knowledge merely to gratify a love of letters. The most are obliged to make use of the attainments they have made as a means to give them a support. No one will improve his education beyond what is required by the common business of life, unless he knows that these extra acquisitions will be the means, hereafter, of giving him higher wages for his services. He cannot afford it. If he prepares himself to teach others, the taught must be willing to pay him for that preparation; for these previous expenses will not be incurred unless there is a certainty of a future return. If the wages of teachers were higher, the candidates for this profession could afford to make a proportionate preparation for this office. And hence, if parents would improve the character and usefulness of their schools, they must be willing to indemnify teachers for the extra expenses necessarily incurred by making suitable attainments. Young men will never qualify themselves to teach *until they see this disposition in parents.* But as soon as a good education is honored and rewarded in a teacher, acquisitions extensive and suitable will be made. Reward the profession of teaching as liberally as we do the profession of law or physic, and the teacher will be as liberal in his preparation as the lawyer or the physician. If we have poor teachers, it is because we give poor pay; and if we would have better teachers, we must pay better. Parents have it in their own power, as we trust has been clearly shown, to raise the character and qualifications of teachers; and we shall now show that it would be for the parent's advantage to do so.

In the first place, it would be the parent's interest to employ qualified teachers, *because it would save tuition money.* Parents pay more money for the education of their children by employing incompetent teachers, than they would do, by employing teachers who are competent. In the affairs of life parents generally perceive that the cheapest article is commonly the dearest; and those of more reflection perceive that this is always the case in the article of teachers. A child, to obtain the same amount of knowledge, must attend to the instructions of a poor teacher three times as long as would be necessary with a good teacher. Thus, if parents do give but little to the *teacher*, they pay dearly for their children's *instruction.* If they would secure the services of a qualified teacher, by giving him double the price of present wages, their school tax would be one-third less than it now is. We think it is clear, that even in a mere pecuniary point, it would be for the interest of parents to give a suitable compensation to competent instructers.

In the second place, qualified teachers would promote the parent's interest *by saving their children's time.* Scholars under a good teacher, will be as far advanced at fourteen years of age, as they will be at twenty under a poor teacher. The time between fourteen and twenty could be spent in learning a useful trade, or in assisting the parent in the maintenance of the family. When children arrive at fourteen years of age, they should begin to acquire habits of industry; and at this age their services begin to be of considerable value to the parent. If the child is sent to school at a proper age, a faithful, qualified teacher will have given it a good English education at fourteen. The child is then prepared to engage in some useful employment. But under the present state of things, children must be sent to school more or less till they are twenty, and then have but a very limited education; not so good as they might have

at fourteen if properly instructed. Parents do not perceive the time which is lost by employing incapable instructers. The time which the children would gain, if sent to a proper teacher while young, would be worth much more than the little extra expense of a good school. Thus it would be much the cheapest for parents to engage the services of teachers who have prepared themselves for their profession.

In the third place, qualified teachers, who would be able to govern correctly, and facilitate the progress of children, *would save the parent much expense in books, paper, maps, slates,* &c. The school stationary of a large family amounts to a considerable item in the course of a year. Parents know that these incidental expenses are quite a tax; and every one would be glad to have them less. Now, the more rapid the improvement in writing, the smaller the quantity of paper, pens, and ink, which the child will require; the faster the scholar learns to read, the fewer the books which will be necessary; and the quicker the pupils learn their geography and arithmetic, the less the expense of maps, slates, &c. Thus teachers, who could facilitate the progress of the scholars, would save the parent much expense in the stationary of the school-room; and hence the parent's interest would be promoted by employing teachers whose wages must be higher indeed, but whose qualifications would be such, that they would always be found the cheapest.

Lastly (and this every one will think a very important consideration,) teachers who have prepared themselves for their profession are the most profitable for parents to employ, *because they will then know that their children will be well educated.* This confidence in the instructor will prevent much care and anxiety on the part of the parent. Children are forming a character every moment; and their education, of some kind or other, is constantly going on; this parents know, and it gives them great pleasure to reflect, that their offspring are directed by the skilful, moral influence of a good teacher. It likewise gives the parents pleasure to reflect that their children's progress in knowledge is *thorough and useful.*

With a cheap, unqualified teacher, the pupils spend most of their valuable time in learning what they must some day or other unlearn, if they ever make studious, correct scholars. Parents frequently pay cheap instructers more for teaching their children what is wrong or useless, or must be forgotten, than would be necessary to give them a good knowledge of elementary studies, under a suitable teacher.—This useless expense, bad instruction, and slow progress, would never occur to give the parent distress and anxiety, if a faithful, confidential teacher was always engaged. But all these evils the parent must expect, if he is penurious and short-sighted enough to hire a cheap, worthless teacher.

Again it is common for parents to have not a little trouble in making their children go to school.—Now this unwillingness to attend school, manifested by the child, does not arise from its dislike to learning, but from the parents having placed an ignorant, repulsive man in the school-house. The whole exercises of the school are made so unpleasant and disagreeable, that the pupil heartily hates knowledge, and *every place where it is taught.* It would save children much unhappiness, and parents much labor, if an engaging, accomplished teacher was employed; one who would make the school room the most delightful and profitable one they ever could enter.—But before men can understand the operations of the youthful mind, and impart useful knowledge in an attractive, simple manner, they must be well educated, and well instructed in the art of teaching; and this will not be until parents reflect, and perceive that it is for *their interest* to pay wages which will induce men to make the necessary preparations.

If parents would increase the teacher's wages, *they would raise the character of the profession.* The compensation for teaching is so small, that accomplished, well-educated men can find other employments much more profitable than teaching. Thus, those who would become useful instructers, and an honor to the profession, are excluded, unless some of these men are willing to make a sacrifice; and our school houses are left to be supplied by the necessitous and unqualified. Indolent, immoral, and ignorant men are often employed to teach our common schools: these disgrace the calling, and have made the saying "as lazy and conceited as a schoolmaster" familiar everywhere. Now, what is it that draws into our schools the worthless, and excludes the worthy. What is it that prevents men from becoming capable teachers? What is it that makes teaching disreputable? Parents, it is your sordid avarice, your own short-sightedness, and your cruelty to your own children! By offering an adequate compensation to teachers, you could command learning, talent, and elegance. By a high-minded, generous attention to your children's education, you may make the profession of teaching take an equal rank in usefulness and respectability with the lawyer's and the divine's. YOU MAY MAKE OUR LITERARY MEN FEEL IT THEIR HIGHEST AMBITION TO BECOME GOOD SCHOOLMASTERS. The honor of the profession of teaching rests with you; you can continue its low condition, or you may raise it to honor and respectability.

Parents cannot receive the advantages of the school system, unless they employ qualified teachers. Legislation in many of the states has done much for the education of children. Large school funds have been raised to assist the parents, and a wise and liberal system has been organized to give union of action and instruction to the inhabitants of every district. Through the vigilance of the public officers, those princely funds have an equitable distribution; and the school system is everywhere in active operation. The wisdom of legislation, and the watchfulness and counsel of learning and talent are ready to assist and protect our schools. The great thing that is wanting is the *co-operation of parents.* Unless parents are willing to unite their efforts with legislation and official counsel, they will receive but little aid from the government.—Great assistance, indeed, may be had from the school funds, and the school system, if parents will make active, liberal co-operation; but without this obligatory exertion on the part of the parents, the State can do but little good. It is to be regretted that so great a part of the school fund is lost by being squandered on unqualified teachers. Parents, by hiring such teachers, pervert the benevolence of the State, and exclude themselves from those advantages which the government wishes to give them. If the funds were bestowed on worthy, well-qualified teachers, the inhabitants of the district would be greatly assisted, and the spirit and intention of the school law would be fully answered. But the public funds are lost when they support men who are rather an injury to the schools than a benefit; and the parents voluntarily deprive themselves of that aid which is so generously offered to all. We do hope that parents hereafter will feel unwilling to pervert the public school funds by squandering them on unworthy, incompetent teachers; and that they will be disposed to receive the advantages of these funds by engaging such teachers as the *law intended the funds should support.*

And finally, *to employ well-qualified teachers is the only way for parents to increase the usefulness and raise the character of district schools.* Parents may employ men to recommend the best systems of government, and the best method of teaching; and they may purchase the most improved school books for their children; and they may be attentive to their children's education at home; and they may do all that can be done; and after all, if there is an unfaithful, unqualified teacher in the school-house, all that is done is lost, worse than lost; for they have given their children the means of perverting privileges, of learning error, and of confirming bad habits. Let me, then, again say to parents, if you would act according to your own interest, even in a pecuniary point; if you would encourage young men to qualify themselves for teaching; if you would have your children well educated; if you would have your children love knowledge; if you would raise the character of the teacher's profesion; if you would make it the highest ambition of literary men to become a good schoolmaster; if you would receive the advantages of the school system, and obey the spirit of the school act, be willing to give such wages as will secure the service of *faithful, well qualified teachers.*

We have only referred to the subjects of eight or nine sections; but there are two or three and twenty of them, and all treated with calmness, clearness, and much thought, evidently the offspring of much observation on the practical working of the system as it exists. The style is striking and vigorous, though occasionally careless and colloquial. We are not sure, however, that that is an objection for such a book, which to produce the effect that may be hoped from it, should pass into the hands of farmers and others who in fact regulate the district schools; and who are more likely to be taken with plain strong talk, than by flourishing periods. We conclude, as we began, by sincerely commending this volume to all who desire that national education should with us be a truth, and not a mere statutory provision, rendered nugatory, if not mischievous, by the manner in which it is executed.

THE AMERICAN QUARTERLY REVIEW, No. XXX. Philadelphia: KEY & BIDDLE.—Politics, literature, and criticism, are most agreeably combined in this number. The leading paper, on the life and speeches of Mr. Canning, is written with great eloquence, and with an enthusiastic admiration of that highly gifted individual, that in our judgment overrates, not his talents, but his qualities, as a statesman. We extract, for the sake of recalling to many of our readers, that fine illustration in Mr. Canning's Plymouth speech, derived from the line of battle ships laid up in that port.

Speaking of the preparation of England to embark in the war against France, he says:

"Our present repose is no more a proof of inability to act, than the state of inertness and inactivity in which I have seen those mighty masses that float in the waters above your town, is a proof that they are devoid of strength, and incapable of being fitted out for action. You well know, gentlemen, how soon one of those stupendous masses, now reposing on their shadows in perfect stillness—how soon, upon any call of patriotism, or of necessity, it would assume the likeness of an animated thing, instinct with life and motion—how soon it would ruffle, as it were, its swelling plumage—how quickly it would put forth all its beauty and its bravery, collect its scattered elements of strength, and awaken its dormant thunder. Such as is one of these magnificent machines when springing from inaction into a display of its might—such is England herself, while apparently passive and motionless she silently concentrates the power to be put forth on an adequate occasion."

This, as the Reviewer justly says, "is not merely eloquence,—it is poetry in the beauty of its conception—it is painting in the complete delineation of its images—it is music in the harmony of its language."

A capital article follows on the Italian lyric poets, in which some of the English versions of Italian poems are truly good.

The long paper on *Shirley's* Dramatic Works, which is a sort of sequel to the admirable article on the same subject in a recent number of the London Quarterly, will attract many readers. We pass from that to an interesting notice—with some most interesting extracts—of another series of the Diplomatic Correspondence of the United States, published under the direction of the Secretary of States. It embraces the period between the peace of 1783 and the adoption of the Constitution in 1789, and embodies much of the greatest attraction to all students of our early annals. Our limits forbid long quotations. We confine ourselves to two. The first thus states a fact interesting to Episcopalians:

Mr. Adams was sent minister to Holland, prior to his embassy to England, which we shall presently notice. While at the Hague, in the year 1784, an application was made to him by an American gentleman then in London, a candidate for orders in the Episcopal Church, desiring to know if American candidates might have orders from Protestant bishops on the continent, and complaining that he had been refused by the bishop of London, and the archbishop of Canterbury, unless he would take the oaths of allegiance, &c. Mr. Adams inquired of the Danish Minister for information upon the point, and it was laid formally before his Danish Majesty. What Mr. Adams intended merely to be current conversation, was made the subject of deliberation by the goverament of Denmark, and their faculty of theology. He received the following extract of a letter communicated by M. de St. Sapherin, Danish Envoy to the States General:

SIR:—"The opinion of the theological faculty having been taken on the question made to your Excellency, by Mr. Adams; if American Ministers of the Church of England, can be consecrated here by a bishop of the Danish Church? I am ordered by the King to authorize you to answer, that such an act can take place according to the Danish rights, but for the convenience of Americans, who are supposed not to know the Danish language, the Latin language will be made use of on the occasion.—For the rest, nothing will be exacted from the candidate but a profession conformable to the articles of the English Church, omiting the oath called

test, which prevents their being ordained by the English bishops."

Mr. Adams felt himself called upon to communicate this to Congress, when the following proceedings were had thereupon:

"*Extract from the Secret Journal of Foreign Affairs, March* 21, 1785.

"On the report of a committee, consisting of Mr. Holton, Mr. W. C. Houston, Mr. Read, Mr. Bedford, and Mr. Hardy, to whom were referred sundry letters from the ministers of the United States at Foreign Courts,

"*Resolved*, That the Minister Plenipotentiary from the United States to the States General of the United Netherlands, be instructed to communicate to Monsieur De St. Saphorin, Envoy Extraordinary from his Danish Majesty to the States General, the high sense the United States, in Congress assembled, entertain of the liberal decision made by his Majesty, on the question proposed to his Majesty's Minister at the Hague, by Mr. Adams, Minister from the United States, respecting the ordination of American candidates for holy orders in the Episcopal Church, commonly called the Church of England.

"*Ordered*, That the Secretary for Foreign Affairs transmit to the Executives of the several States copies of Mr. Adam's letter of the 22d day of April, 1784, as well as of the papers therein enclosed, relative to Episcopal ordination."

The other records a capital letter from a tailor Alderman of New York, who, through mistake, had issued a writ against a servant of the Dutch Minister, *M. Von Berckle*. Being requested by Mr. Duane, the Mayor, to explain the circumstances, he wrote this letter:

"*New York January* 19, 1788.

"Sir—In answer to your letter of the 7th instant, on the subject of a complaint exhibited against me by the Minister of the United Netherlands, I beg leave to inform you substantially of my whole conduct in the business, from which you will be enabled to judge whether I have, in the least, been guilty of the violation of the privilege of an ambassador.

"On Tuesday, the 18th December last, I issued a warrant against a certain James Van Antwerp, at the suit of John Van Geldert for a debt; which warrant by mistake I dated the 14th, instead of the 13th. That on Tuesday following I received two messages from his Excellency, Mr. Van Berckel, desiring me to wait on him immediately; I accordingly left my business, and went to his Excellency's residence, when, after waiting in a cold room for a quarter of an hour, his Excellency appeared, and asked me my name, I answered John Wylley; he charged me with having issued a writ against his servant, which I denied; I then asked him the name of his servant, and on his answering Van Antwerp, I said I had issued a warrant against a young man of that name, not knowing him to be an ambassador's servant, but supposing him to be in the service of Mr. Stevens, as I was informed by Mr. Van Gelder, the plaintiff, at the time of issuing the warrant. His Excellency then said I should be made to know his servants; I replied that I did not know that I was obliged to know him or his servants, but in the way that was right. He then directed me to go home, and mind my tailoring, that I had no business to be an aldermam. I replied that I had supported myself and family many years by the tailor's business, and hoped for the continuance of the favours of many good friends who had employed me in that way; that as to the office of alderman, the people had been pleased to elect me, and I placed my hope in a higher power than that of his Excellency for support, in the execution of my office. He then said I should be punished, as falling under his notice. I replied, I asked no favour of him; he then asked me if I did not know that his person was sacred; I replied I did, and had done him no injury. He then repeated the threat, that he would punish me; and I again answered, I asked no favour, then, setting himself in the window, he asked me if I thought him a fool. I answered, that the people of the States of Holland would be wanting in their duty, if they should send a fool on so important an embassy. I then asked him if he had any further command, and on receiving no answer, I wished his Excellency a good morning.—On my leaving the room, he repeated the threat of punishment, and I repeated the answer that I asked no favour. I have the honor to be, &c.,

"John Willey."

Bancroft's admirable first volume of the history of the United States, is commended in terms of befitting praise; and the number winds up with a paper on the *Executive Power*, which even after the admirable expositions of the Websters, the Calhouns, the Clays, and other hardly inferior minds, is yet striking by the vigor and justness of its arguments.

This number of the Review is of great general excellence.

The Doomed; 2 vols. Philadelphia: Carey, Lea & Blanchard.—We find in the Baltimore American a notice of this work, which so aptly coincides with our own opinion of it, that we make no scruple of adopting it:

There is a caricature of the famous French comic actor Potier, pursued by a dream: the expression given to his countenance, represents well the feeling produced on the mind by reading this book. One feels as if pursued by a dream. It is the old tradition of Ahasuerus, condemned to wander on the earth to the last day of time, which has frequently before been unwisely made the subject of a fictitious narrative. The reader soon partakes of the weariness of the wanderer, and with his imagination fatigued by the vagueness and extravagance inseparable from the subject, sympathizes with him from being made a sharer of his misery. The preface is in good keeping with the book itself, having the empty mysteriousness of a dream."

Works of Mrs. Sherwood; vol. V., Uniform Edition. New York: Harper & Brothers.—This handsome stereotype edition of the well-renowned writings of Mrs. Sherwood is hastening on. This volume comprises "The Infant's Progress," "The Flowers of the Forest," Julianna Oakley," "Ermina," and "Emancipation."

Waldie's Select Circulating Library; Part 1, vol 3.—We have received from the agents here, *P. Hill, & Co.* of the Philadelphia publishers, bound in a comprehensive volume, the weekly sheets of this Library from January to June of the present year; and certainly in cheapness of price, and good taste in selection, this work cannot, we imagine, be surpassed.

The Oriental Library; No. 1. Edited by A. D. Patterson. New York: J. Swinborne & Co.—This is the first number of a new periodical devoted to illustrate Eastern literature and fable. It commences, therefore, appropriately enough, with the *Arabian Nights*, which are to be republished from the best edition, with original notes, critical and explanatory. The publication is to be weekly, and the price sixpence per number, or $3 per annum. We like the notion and hope others will.

Mechanics Magazine, vol. IV. No. 3; New York: *Minor & Challis.*—The latest number of this valuable and improving miscellany, is before us—and we have only to repeat of it, what we have had frequent occasion to say before, that no work seems to us better calculated than this to elevate the character and increase the just influence, by increasing the knowledge, of Mechanics.

We are again obliged to omit some notices of new works; but cannot close the Review to-day without announcing that *Mr. Dunlap's History of the Rise and Progress of the Arts of Design in the U. States*, is in a state of great forwardness, and will soon be published. We run no risk, we are sure, in predicting that this will be a work eagerly sought for.

SUMMARY.

The Abingdon (Va.) Statesman of Saturday, 20th inst. says:—The President of the U. States arrived in this place yesterday, on his return to Washington City. He left here the same evening. He seemed to be in good spirits; and we were gratified to find that his health has been much improved, by his visit to the Hermitage.

Wm. H. Aspinwall, of this city, has been recognized by the President as Vice Consul for Tuscany in the city of New York.

Mr. Wyer, the bearer of the ratification by the President and Senate, of the Treaty, lately concluded by Gov. Van Ness, with the Spanish Government, for the satisfaction of the claims of American merchants, arrived in Madrid on 22d July. The exchange of the ratifications, which, by the terms of the treaty, was to take place in that city, would be completed, it was supposed, without delay, when Gov. Van Ness, as is generally understood, will return to this country.

[*From the National Intelligencer.*]

Mr. McDuffie.—The Charleston Mercury contains a letter from Mr. McDuffie to Governor Hayne, resigning his seat in the present Congress. He states, that although he has devoted himself exclusively to the restoration of his health for the last four or five months, it has experienced no material improvement.

Another is thus added to the number of those Members of the House of Representatives, who, either from the severity of the service in that body, or from other reasons, have withdrawn from it or declined being candidates for re-election, since the termination of the last session of Congress. The House and Nation will feel the loss of such men as Mr. Binney, Mr. McDuffie, Mr. Edward Everett, Mr. Gorham, Mr. Choate, Mr. Bates, Mr. Ellsworth, Mr. Huntington, and others, who are voluntarily retiring from the National Councils.

Wm. H. Crawford.—This distinguished individual is no more. He died recently in Georgia while on the Circuit as one of the Judges.

Another Revolutionary Worthy gone.—A letter to a friend, dated Norfolk, Virginia, Sept. 26th, says, "The old revolutionary worthy, the Rev. Jesse Nicholson, Postmaster at Portsmouth, is no more! He died last evening, in the 75th year of his age.—He fought in many of the battles of the revolution, and has been since the establishment of our independence as faithful and zealous a soldier of the Cross, as he had been in early life, in the cause of liberty."

Died on Sunday the 14th inst. at White Sulphur Springs (Va.) where had he gone for the benefit of his health, in an advanced stage of a pulmonary disease, Capt. Silas E. Duncan, of the U. S. Navy, an officer of acknowledged merit—a gentleman of decided worth and purity. He was a native of New Jersey.—[Baltimore Patriot.]

James Hopkins, Esq., the oldest and one of the most eminent members of the bar at Lancaster, Pa., died on Sunday, the 13th instant, at his residence in that city. The Union has the following account of the event:

"A trial of great interest and importance had been progressing for nearly two weeks, in which Mr. Hopkins was the leading counsel for the plaintiffs. On Thursday afternoon, just as Mr. Buchanan, who was one of the counsel for the defendant, had risen to address the jury, he was interrupted by Mr. Hopkins, who expressed a desire to read to the court and jury certain authorities upon which, among others, he said he intended to rely. Mr. Buchanan gave way; but Mr. Hopkins, after a few incoherent remarks, was unable to find the authorities, and resumed his seat. There can be no doubt that the fatal inroads of disease were then commencing, for a short time after he was discovered to be apparently asleep in his chair. There was nothing extraordinary in this this; and the first alarm which communicated itself, was on the part of one of his colleagues, who, after having made several attempts to rouse him from his supposed slumber, expressed his apprehension of something serious to the court, when, upon examination, it was discovered that his fears were but too well founded. He was immediately carried home in a chair, medical aid called in, and bleeding promptly resorted to—but in vain—the ravages of disease baffled the energies of science and skill, and he lingered on, in nearly unbroken lethargy, until about nine o'clock of the succeeding Sunday morning."

Joseph Blundin has been convicted at Doylestown, Pa. of "murder in the first degree," for killing Aaron Cutlehon with a scythe, on the 27th July; on which day, being *Sunday*, they were engaged with five other men in cradling oats.

Counterfeit Detector.—We have received from Mr. Seixas, 162 Broadway, one of "Moore's Patent Eagle Balance," which are for sale by Mr. Seixas—and which are so constructed that any counterfeit of the half or quarter Eagle must be instantly detected. The Balance is alike ingenious and simple, and cannot err.

[*From the Philadelphia Gazette.*]

PENNSYLVANIA STATE DEBT.

The State debt is about - -	$23,000,000
The interest is - - - -	1,150,000
Repairs about - - - -	350,000
The Canal officers, &c. - - -	120,000
	1,620,000
Tolls this year, - - - -	350,000
	$1,270,000

This *one Million two hundred and seventy Thousand dollars*—remarks the Harrisburg Intelligencer—is what will be left this year, after deducting the tolls, &c. to be paid in taxes by the people, in some way or other.

At the Supreme Court, held at Greenfield, Ms. last week, Benjamin Perry was mulcted in the sum of $1250, in an action for slander, brought by Laura Howe, a widow lady, 23 years of age, and of reputable character. No justification was attempted on the part of the defendant.

Snow.—We learn, says the Boston Gazette, by a gentleman from the White Mountains, that there was a heavy fall of snow in that vicinity a week ago last Thursday night; and for several mornings afterwards ice was of the thickness of a dollar at Crawford's.

The splendid ship ECHO, of about 800 tons burthen, built by Messrs. C. Bergh & Co. for Russell Glover, Esq., and to be commanded by Capt. Mallett, was launched on Thursday morning, from Bergh's ship-yard, foot of Scammel street.

ALEXANDRIA, MONDAY MORNING.—*Ship Launch.*—The fine ship Metamora was launched from Hunter's ship yard on Saturday last, at 2 o'clock, P. M. She went off in beautiful style, gaily decorated with flags and streamers, amidst the cheers of numbers who had assembled to witness her "taking to the water." This ship, of the largest class of merchants, built of the finest materials, and in every respect first rate, reflects much credit upon the builder, Mr. Robert Hunter, one of the most experienced and skilful ship builders in the United States. She is owned by Edward Dangerfield and others.—[Phœnix.]

The Steamboat Edgefield, with a valuable cargo, for Charleston, sunk on the 18th in the Savannah river just below Hamburg.

The steamboat Waterwitch, Captain Vanderbilt, while on her passage down from Hartford on Wednesday morning, ran upon a snag or rock, near Middletown, and sunk in about nine feet of water. Her upper deck remains out of water, and it is expected that the boat can be raised. The passengers were all got off without injury.—[Daily Adv.]

Dreadful Shipwreck—more than 300 lives lost.—Extract of a letter from Pictou, dated 11th Sept. "We have just received accounts of the loss of the ship Sybelle, of Liverpool, from Cromatry, for Quebec, with 316 emigrants, all of whom perished; six of the crew saved themselves in the boat, four of whom arrived here this morning. Can nothing be done to erect a Light House on that fatal Island?—Surely means should be taken, if possible, to prevent such fatal shipwrecks.—[Halifax paper.]

We may say without fear of contradiction, that *more than a thousand* of the emigrants who have left Great Britain and Ireland the present year for Quebec, have *perished by shipwreck on the passage.*—This is a 30th part of the whole number of emigrants. Of a still greater number who have left the same countries for New York, *not one has perished by shipwreck.* These are facts worthy of being taken into consideration by emigrants and their friends.—[Journal of Commerce.]

Shipwrecks.—Bermuda papers to Sept. 16th bring us intelligence that on the 3rd, the hull of a vessel, keel up, was discovered some distance from the Islands, and was towed nearly to shore, when an attempt was made to right her, but without success.—On the 6th, she was scuttled, and it was ascertained that she was the "Helen of Bath." Her foremast floated up, and appeared to be much worm-eaten.—Her foreyard was still across. Subsequently, upwards of 13,000 staves, (red oak,) were recovered from the wrecks.

About midnight on the 12th September, the schr. James A. Stewart, Kellam, from Baltimore, bound to St. Thomas, ran on the reef off the N. W. end of Bermuda, and immediately bilged and soon filled with water. The crew taking to the boats landed at Somerset on the following morning about 4 o'clock. The whole of the cargo and materials were landed, and exertions were making to get the hull of the vessel into port.—[Jour. of Com.]

FROM BERMUDA.—By the Br. sloop Experiment, Captain Tynes, we have received Bermuda papers to Sept. 16th.

They contain intelligence from many of the British West India Islands in regard to the operation of the Emancipation Law which went into operation on the 1st of August; and, we are happy to say, it is in general of a favorable character. At St. Christopher's, where some discord had occurred, tranquility was again restored. In several other Colonies the negroes at first refused to work, but in one way or another their insubordination was speedily subdued.—[Jour. Com.]

Whew! what have we here!

To all Nations, Languages and People, Greeting.

KNOW YE that I, NIMROD MURPHREE, of the city of Nashville, and state of Tennessee, have discovered perpetual motion, N. MURPHREE.

Nashville, Aug. 27, 1834.—We clip the above from the last number of the Nashville (Tenn.) Banner, where it appears as an advertisement, without note or comment. Probably Mr. Murphree has succeeded in handing himself over the Cumberland river, or a barn yard fence, by the straps of his boots. We advise him to send his pretensions on the next Congress by Col. Crockett himself, whose motto is "*go ahead!*"—[Mobile Adv.]

A WALK IN THE WATER.—A Mr. Norcross, of Maine, has invented a contrivance which promises to be of importance to sub-marine interests. It consists of a complete dress of gum elastic or India rubber cloth, with an extra skull of lead, so made as to enclose the whole person. From the the skull proceed two tubes, through one of which air is forced down by a pump, which, passing off through the other, maintains a healthful atmosphere for respiration. The eyes are provided with windows in the form of goggles. Caparisoned in one of these dresses, with a companion in a small boat upon the surface to work the air-pump and afford other assistance, a man may examine the bottom of the ocean at his pleasure, enter sunken vessels, fasten grapplings, and do whatever else may lawfully be done. He may labor in a manner which requires a good deal of motion. A saw can be used with so much effect that it is supposed the snags of our Western rivers may be easily cut off. By loading his pockets with stones, a man may sink himself to any depth; and it has been ascertained that at the depth of 100 feet, the pressure is not so great as to be painful, or to prevent activity. In water more turbid than in our harbors, vision is quite distinct for the distance of 10 or 12 feet The contrivance has been pateuted.

The stud of Horses belonging to the estate of JOHN RANDOLPH of Roanoke, deceased—more than 100 head, consisting of Stallions, Mares, Colts Fillies, and a few Geldings—will be sold at auction, at the stable of Wyatt Cardwell, at Charlotte Court House, Virginia: the sale to commence on Thursday, the 9th of October, 1834, and continue from day to day until completed.

It gives us pleasure to be able to state, for the information of his many anxious friends, that the current report of the death of Capt. MUNROE, (son of T. MUNROE, Esq. of this city,) now of the Imparial Army of Russia, and Aid-de-camp to the Emperor, has been authoritatively contradicted by a letter to the family from J. RANDOLPH CLAY, Esq. Charge d'Affaires at St. Petersburg.—[National Intell.]

The Rev. Stephen Olin, President of the Randolph Macon College in Virginia, has received the degree of D. D., from the Wesleyan University, Middletown, Con., and from the College at Middlebury, Vt.

We learn from the Gospel Messenger that the degree of D. D. was conferred at the late Commencement of the Geneva College, upon the Rev. H. J. Whitehouse, Rector of St. Luke's Church, Rochester.—[Churchman.]

LACONIC AND LIBERAL.—Copy of a letter received by the American Board Commissioners of Foreign Missions, enclosing a draft for Two Thousand five hundred dollars:

PAINSVILLE, (Ohio) Aug. 29, 1834.

Mr. G. M. Tracy:

DEAR SIR:—I send the foregoing draft for $2,500 to the American Board Commissioners of Foreign Missions, to be used in the distributing of Bibles and Tracts in China. Yours truly, &c.

A FRIEND TO CHINA.

COMMENCEMENT AT PRINCETON COLLEGE.—The usual anniversary exercises of the College of New Jersey occurred on Tuesday and Wednesday of week. The declamations by the Junior class before the Societies took place on Tuesday evening. On Wednesday the degrees were conferred in presence of a numerous assembly. We subjoin a list, together with the exercises of the Senior class. The commencement ball in the evening we learn was fashionably attended.

The degree of A. B was conferred upon the 37 members of the Senior class.

The Trustees of the college have conferred the degree of Doctor of Divinity upon

The Rev. John Johns, of Baltimore.
The Rev, William S. Reid, of Lynchburg, Va.
The Rev, William Nevins, of Baltimore,
The Rev. Alfred Ely, of Munson, Mass.,

The honory degree of Master of Arts has been conferrd on.

Mr. Samuel U. Berrien, of New York,
Rev. Clarkson Dunn, of Newton N. J.
Edward Courtney Professor of Mathematics in the university of Penn.
Charles Dubuison, Professor of Language in Jefferson College, Louisiana.
Charles J. Haddermann, Teacher of Mathematics in Jefferson College, Penn.
Hon. John Milligan Delaware.

[FOR THE NEW YORK AMERICAN.]

Consecration.—The neat and commodious Church which has been erected by a few Episcopalians in the borough of Princeton, was consecrated to the service of Almighty God, on Tuesday last, by the Right Rev. Bishop Doane, assisted by the venerable Patriarch of the American Church, the Right Rev. Bishop White, and the Right Rev. Bishop Ives, of North Carolina. Morning Prayer was read by the Rev. Dr. Ducachet, of Virginia; the Lessons by the Rev. Dr. Abercrombie, of Philadelphia; and the Sermon by the veteran Presiding Bishop. The Holy Communion was also administered, in which holy ordinance it was interesting to observe at the altar at once the eldest and the youngest Bishop probably in Christendom, dispensing the emblems and pledges of pardon to their brethren in the ministry, of whom the number present was seventeen.

Although the weather was unfavorable, the Church was filled to overflowing, and an attentive and intelligent audience listened with apparent delight and admiration to the solemn and impressive services.

The writer of this notice cannot refrain from expressing the opinion, as an Alumnus of Nassau Hall, that the establishment of the Church in her purity, near this seat of learning, will exert a most propitious influence in favor of that justly celebrated Institution, and that the good feeling with which this work has thus far been conducted may be perpetual.

AN OBSERVER.

THE WATER LILY.

BY FELICIA HEMANS.

Oh! beautiful thou art,
Thou sculpture-like and stately river queen!
Crowning the depths, as with the light serene
Of a pure heart.

Bright lily of the wave!
Rising in fearless grace with every swell,
Thou seem'st as if a spirit meekly brave
Dwelt in thy cell:

Lifting alike thy head
Of placid beauty, feminine yet free,
Whether with foam or pictured azure spread
The waters be.

What is like thee, fair flower,
The gentle and the firm? thus bearing up
To the blue sky that alabaster cup,
As to the shower?

Oh! Love is most like thee,
The love of woman; quivering to the blast
Through every nerve, yet rooted deep and fast,
Mid life's dark sea.

And faith—O, is not faith
Like thee, too, lily, spreading into light,
Still buoyantly, above the billows' might,
Through the storm's breath?

Yes, linked with such high thought,
Flower, let thine image in my bosom be!
Till something there of its own purity
And peace be wrought:

Something yet more divine
Than the clear, pearly, virgin shed
Forth from thy breast upon the river's bed,
As from a shrine.

AMERICAN INSTITUTE.

☞ Mechanics and others, who intend to exhibit models of their inventions at the forthcoming exhibition at *Niblo's Garden*, are respectfully requested to forward to the Editor of the MECHANICS' MAGAZINE, at 35 Wall street, descriptive accounts of the same, with drawings or engravings, (should they wish them introduced into his Annual Report of the Exhibition,) as early as possible, as the report will be made up immediately after the fair is ended.

HONOR TO WHOM HONOR IS DUE.—We have received from the French Consul General, the annexed communication apprising the gallant individual, whose courageous benevolence it records, of the honorable token of respect and commemoration that has called forth from the King of the French, and inviting him to present himself to receive it:

Communication.

The French brig *L'Esperance* of Paimpol, on the 17th of May last was in the greatest danger, and upon the point of foundering. The boat in which the crew hoped to escape, had just been crushed by a heavy sea, and a fearful death seemed inevitable for all, when Capt. NATHANIEL ROGERS,, of the American ship *Grecian* of Portland, then in sight—in despite of the tempest which threatened to engulph him—launched his boat, and boldly adventuring in it himself, succeeded, after unheard of efforts and surmounting dangers the most threatening, in taking off the shipwrecked crew, and almost at the same moment their vessel, *L'Esperance*, disappeared beneath the waves.

Not content with this act of courage and humanity, the captain treated the unfortunate crew with the most sedulous kindness until he landed them at Havre.

Such fine conduct, such noble devotedness, and which does so much honor to the American character, could not be suffered to sink into oblivion. The facts just stated were submitted by the Minister of Marine to the King of the French, and H. M. desired that a gold medal should be struck to commemorate the act, and be presented in his name to Captain Rogers.

The Consul General for the United States, residing in New York, has received this medal, and will hold it subject to the order of Captain Rogers, in case he cannot himself receive it from the hands of the Consul. (Signed)

The Consul General of France in the U. S.
L. DE LA FORET.

New York, 25th Sept. 1834.

The Consul was good enough to show us the medal, which is about the size of a doubloon, though much thicker and more massive. On the one side is the head of the King, with the legend *Louis Phillippe, Roi des Francais*—on the other a civic wreath, within which are the words à *Nathaniel Rogers, Capitaine de navoir Americain, pour avoir sauvé des marins Francais en danger de perir dans les flots*, 1834. (To Nathl. Rogers, Captain of an American ship, for having saved some French sailors in danger of perishing in the waves.)

This is a mode of commemorating the courage and the disinterestedness of Capt. Rogers, alike honorable and enduring, for the duplicates of the medal will take their place in the series of medals which are preserved to illustrate French history, of which, therefore, his noble act will thus become an imperishable part.

It is gratifying to his own countrymen too, in every sense, and none the less, because the period when the die for the medal must have been ordered, was shortly after the unfortunate occurrence at Toulon, where some French sailors were unhappily killed by neglected balls from one of our ships of war. The compliment at such a time to an American seaman, affords the best evidence that no unkind feeling was produced by that *gâchis*.

The schooner Dash, Keating, of Boston, got on a reef at the Carolina Islands, about 16th March, and while trying to heave her off, the natives made an attack on her, and killed three men and wounded Captain K. who, with the remainder of the crew, escaped in the schooner's boats, and made for the Pelew Islands, where part of the crew left Captain K. From thence Capt. K. and his two officers reached Burias, a Spanish province, in April last, and was expected at Manilla 15th or 20th May, but had not arrived there 17th May.—[Boston Atlas.]

The National Intelligencer says—We understand that all the members of the Committee of the House of Representatives on the Post Office business have reached this city. The Committee consists of Mr. Connor of North Carolina, Mr. Whittlesey of Ohio, Mr. Everett of Vermont, Mr. Beardsley of N. York, Mr. Watmough of Pennsylvania, Mr. Hawes of Kentucky, and Mr. Steddert of Maryland.

THE MARCH OF INTELLECT.—In the Albany Journal of last week, we find the following statement of most extraordinary occurrences—involving, it would seem, on the one side crimes of the deepest die, on the other, credulity that surpasses all conception:

"*Matthias the Prophet.*"—This notorious individual, whose proper name is Robert Mathies, was arrested in this city on Monday afternoon, upon the authority of an advertisement issued by Mr. Benjamin H. Folger, of the city of New York. The *expressed* charge against him was, that he had left New York having in his possession a large amount of Mr. Folger's property; but he has been guilty, it is asserted, of many other mal-practices, some of them of the blackest character, and worthy of the most severe punishment.

Mathies commenced his career of fanaticism some two or three years since, in this city, when he proclaimed himself "The Prophet of the God of the Jews," and asserted divine power. He shortly afterwards went to New York, where he continued to proclaim his doctrines, but with little success at first. He soon, however, secured the favor, among a few others of less consequence, of three of the most wealthy and respected merchants of Pearl street—Messrs. Pierson, Mills and Folger. These gentlemen received his doctrines in the fullest confidence, and believed him to be all that he declared himself. Their treasures were thrown open to the impostor, and he lavished them upon himself most profusely. He purchased the most costly wardrobe. His robes of office were richly trimmed with gold and silver. He wore a sword of the finest workmanship, and his gold watch and establishment, equalled the lustre of the most costly.

The bondage of these gentlemen was complete; and the fact that three intelligent citizens of N. York were thus deluded, will form one of the darkest pages in the whole chapter of modern fanaticism; but the chain with which they were bound is broken.

Death liberated Mr. Pierson. He died in Westchester county, at his country seat, near Sing-Sing, and the event was clothed in mystery. A short time previous to his death, and while in health, as we understand, Mathies prevailed upon Mr. P. to assign to him his whole estate. He was shortly after taken sick, and, although his friends who were with him insisted upon calling medical aid, they were deterred by Mathies, who told them that "*he had power of life and death, and Mr. Pierson would not die!*" But he did die; and a subsequent examination of the body by three able physicians, resulted in the conviction that *he had been poisoned*, and certificates to this effect were drawn up and signed by these physicians, and are now in New York. *Who* poisoned Mr. Pierson is to be determined by the proper tribunal.

The mysterious death of Mr. Pierson and the accompanying circumstances, shook the confidence of Mr. Folger and his family, and they resolved to abandon Mathies and his principles. After his return to New York, they announced this determination to the "Prophet," who then declared to them, that if they did, "sickness, and perhaps death, would follow!" This threat was not sufficient to overthrow their resolution, and a day was fixed upon when Mathies should leave the house. Upon the morning of that day, Mathies partook of very little breakfast, and scarcely tasted the coffee, saying as an excuse, that he was unwell. Immediately after breakfast, Mr. Folger, his wife, and children, were taken violently sick. Mr. Folger did not suspect the cause of his sickness until after the villain had left the city; when, upon examination, he learned that the black woman who did the cooking for the family, had also abstained from the use of any coffee upon that morning, and, from other circumstances, he became confirmed, that *the woman was bribed by Mathies to poison the family*. From some cause, the effort was not successful. To none of the family did it prove fatal, although all of them have not yet recovered from its effects. This transaction induced Mr. F. to procure his arrest, for which purpose he despatched the notice before mentioned.

Mathies did not expect thus suddenly to be stopped in his mad career, and expressed a good deal of surprise when arrested. He had in his possession two large trunks, which he acknowledged contained articles which *did* belong to Mr. Folger, but which, he said, Mr. F. gave to him when he left New York. Among the articles were sundry rich dresses, about $500 in gold, a gold watch worth about $160, a sword of great value, and a rod with which he was going to measure the bounds of his paradise, "the gates thereof and the walls thereof." He was taken to New York this morning.

His trial will unfold strange deeds of crime and fanaticism.

The Journal of Commerce gives this account of the same impostor and villain:

For a considerable period prior to the year 1832, Mr. Benjamin Folger, of this city, was on terms of the most intimate friendship with a Mr. Elijah Pierson, also of this city, whose piety and good sense he highly respected and esteemed. A short time previous to the period adverted to, Matthews had announced to Mr. Pierson that he (Matthews) "was the spirit of truth, that the spirit of truth had disappeared from the earth at the death of the Matthias mentioned in the New Testament, that the spirit of Jesus Christ had entered into that Matthias, and that he (the fellow now in Albany Prison) was the same Matthias, the apostle of the New Testament, who had risen from the dead and possessed the spirit of Jesus of Nazareth. That he (Jesus Christ) at this second appearance, was God the Father, and had power to do all things—to forgive sins, and communicate the Holy Ghost to such as believed in him."

The above tissue of blasphemy and absurdity was, strange to say, believed by Mr. Pierson, and regarding Matthews as the character he represented himself, he respected him accordingly, and took him into his house to reside with him.

In the month of September, 1832, Mr. Pierson introduced Mr. Folger to Mr. Matthews, and at the same time informed him, who and what Matthews announced himself to be, and also of his (Pierson's) implicit belief in the truth of Matthews' divine attributes. Matthews having thus become acquainted with Mr. Folger, lost no time in endeavoring to increase the number of his dupes, and repeatedly called at Mr. Folger's counting-house to announce his divine mission, and strove to convert Mr. Folger to a belief of it. On one occasion he said to Mr. Folger, "I know the end of all things," and then made use of the following mode of illustrating his assertion.—Taking up a piece of paper he placed it in a drawer, so that one end of the paper remained outside the drawer, and then said to Mr. Folger, "You can see but one end of the paper, which is outside the drawer, and so the world sees; but I see the whole length of it—I see the end."

He succeeded in impressing Mr. Folger and a few others with a firm belief that he was the prophet he pretended to be, and having gained this point, he then began to execute the true mission he came upon, and informed Mr. Folger that "he was poor and in want of money; that the world persecuted him, and it was instigated to do so by the devil, because there was no truth now in the world except in him (Matthews.)"

Puerile and absurd as were these representations, they nevertheless induced Mr. Folger to give Mathews different sums of money,—and the latter, encouraged by his success thus far, determined to spare neither promises nor threats to make the best of the advantage he had gained. In addition to what he had already told Mr. Folger, he therefore informed him that he (Mathews) had commenced the reign of God on earth; that Mills and Pierson had been called into the kingdom, and although the devil had succeeded in suspending for a time its permanent establishment, he (Mathews) would now go on to overcome the devil and to establish the kingdom of God. Under these circumstances he called on Mr. Folger to contribute of his substance for his (Mathews') support and the promotion of the kingdom, and threatened that in case he should refuse to provide him whatever money he wanted, he would visit upon him (which he was empowered to do) the wrath of the Almighty; but that if he (Folger) would believe in him and obey him in all things, he should be called into the kingdom, and he (Mathews) would forgive him all his sins, and he would enjoy eternal happiness.

In this style Mathews continued preaching, until by dint of downright impudence he converted, or rather perverted, Mr. Folger to the firm belief that he was the personage he represented himself to be.

In the month of August 1833, Matthews went to Sing Sing, West Chester county, where Mr. Folger had a furnished house, and where his family at that time resided. As Matthews brought his baggage along with him, his intention of a long visit to Sing Sing was pretty obvious, and Mr. Folger invited him to take up his residence at his house. Having remained there a week, he got tired of such narrow accommodations, and told Mr. Folger that he and Pierson ought to hire a house for his own special use. Mr. Folger consulted Mr. Pierson on the subject, and they agreed to comply with the very reasonable request of Matthews, and so informed him. In the meantime the ambition of Matthews had so increased

that a hired house would no longer content him, and he intimated to his two friends that it would be improper for a person of his character to reside in a hired house, and that they ought to purchase a house for him. This also Messrs. Folger and Pierson agreed to; but before they could accomplish their purpose, Matthews imparted another revelation to Mr. Folger, and informed him that the house which Mr. Folger purchased sometime previous at Sing Sing, and in which he then resided, had been purchased for him, Matthews, and that the spirit of truth had directed Mr. Folger in making the said purchase."

As the house had been thus miraculously purchased for Mathews, he had of course a clear right to remain in it, and he did remain in it without further ceremony until October, 1833, when he required that Messrs. Folger and Pierson, who then resided with him, should give up the house to his own charge, which they accordingly did.

In the latter part of October, 1833, he required them to give an account of their property, and having attained it, he demanded that they should both enter into an agreement to support him, which would insure them the continued blessing of God. They accordingly entered into the required agreement, and supported him, and supplied him with whatever money he demanded, until the month of August, when Mr. Pierson died. On the death of Mr. Pierson, Matthews came to reside at Mr. Folger's house in this city, and continued to be supplied with money by him, until last March, when Mr. Folger unfortunately became bankrupt. Notwithstanding this occurrence, Matthews continued to reside with Mr. Folger, until last September, when the latter intimated to him that he could no longer continue to support him, and that they must then part. Matthews by no means liked the proposed arrangement, but being determined to make the most he could of the *matter*, and knowing that Mr. Folger had some money belonging to the estate of his wife, he told him very peremptorily, that "he must not throw him destitute on the world, that if he did so the blessing of God would depart from him, but that if he gave him money to support him, the blessing of God should continue to him." Mr. Folger then gave him one hundred dollars in bills of the Bank of the United States. Matthews received this money a few days prior to the 18th of September, and on that day he told Mr. Folger that he was about to leave his house, but insisted on being supplied with more money before he took his departure. In order to obtain it, he had recourse to his old expedient of threatening and promising the wrath or blessing of God, according as his demand was refused or complied with, and so wrought on Mr. Folger, that in addition to the hundred dollars he had already given to him in bills, he now gave Matthews five hundred and thirty dollars in gold coin—on receiving which, he left Mr. Folger's house, and immediately after departed from this city. Besides the above mentioned sums of money, and those which he obtained at different other periods, from Messrs. Folger and Pierson, he also obtained a watch from the latter gentleman, and in the month of January last, he informed Mr. Folger that some person had taken the watch from him, and that "it was Mr. Folger's duty to provide him with another, and that the blessing of God would rest upon him if he did so." Mr. Folger immediately purchased a fine gold watch, with a chain and seal, for which he gave one hundred and fifteen dollars, and gave it to Matthews.

FEMALE DIPLOMACY.—The first question usually demanded in France, on the appointment of a new ambassador to any foreign Court, is—'Whom has he engaged as cook?—Has he secured a *Cordon Bleu?*' In England, on the contrary, no sooner has a lordship of any kind kissed hands and received his credentials upon his promotion to be an Excellency, than the newspapers begin to inform the world at what warehouse in the 'Acre' his state-carriage is to be seen;—the description of his patent axles and hammercloth alone is sure to occupy half a column of the *Morning Post*. The German *corps diplomatique*, meanwhile, would appear to be a squadron of poets. A High Dutch Envoy is often chosen in honor of his epic;—and not an *attaché* of them all but has been guilty of a small matter of a lyric!

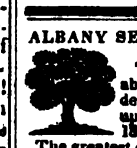
But if the most necessary appendage to the dignity of the representative of the Tuileries be a white night cap, and of those of St. James' a body coachman in a white wig, other countries of modern Europe, which it would be ungracious to name, insist that the ambassadors who represent them shall be *married men*. A wife is, in certain instances, the one thing needful; and *Her* excellency's Excellence in diplomacy, is at least twice as important as *His*. *He* plays his fantastic tricks in Downing street, or the Rue des Capucines, before high ministers, who are on their guard against every step he advances:—*She*, in ball-rooms and at banquets, where no one mistrusts her machinations, and where every flirt of her fan is worth a protocol! A Prince may turn aside from the expostulations of the most courteous and courtier-like diplomatist who ever bowed his way with retrogressive dignity, without offending the eye of Majesty by the spectacle of the tail of his embroidered suit; but we defy either King or Kaiser, ay! even those autocratic Majesties whose northern breeding '*sent le goudron*,' to be ungracious towards a fair diplomatist, who wears her train and lappets meekly, and distributes her curtseys and courtesies with proper tact. The female moiety of a mission *cannot* but be well received: and it is its own fault if it fail to make the most of its opportunities. One of the most eminent prime-ministers of the last reign is said to have owed his elevation to the influence of a foreign ambassadress, who knew that she was serving her own government by exercising in his favor the influence secured to her over the mind of the King, by her elegance and high-breeding—the whiteness of her white satin, and the size and lustre of her strings of Orient pearls. Her Lord although a sufficiently great man in his little way, would scarcely have cared to direct his Majesty's choice of a *valet de chambre;* while *She* (honor to her diplomacy!) contrived to direct the formation of a Cabinet, and to nominate the sovereign legs to be successively honored with every vacant Garter! It was her excellency who decided, for a year or two, whether we should up to Ramoth Gilead to battle, or whether we should forbear!

Nothing can be clearer, therefore, than that the matrimonial tendencies of the dipolmatic class are of the highest importance to the governments of their respective countries. Princess Lieven, Princess Esterhazy, and the Duchess of Dino, have severally done their parts of conciliation for their royal and imperial masters; and propitiated more votes both in the Upper and Lower House by their graces and ingration, than even the *finesse* of a Talleyrand, or the high-breeding of an Esterhazy; and we would wager a five sous piece (the largest sum likely to be hazarded by a *Roi-Citoyen* of frugal habits,) that on the retirement of the latter of these three diplomatic graces, Louis Philippe might achieve a majority in our high court of parliament in the course of six months, by confiding his *lettre de créance* to the brilliant Madame de Caraman. Certain public prints, we observe, are much addicted to bringing forward the Countess Flahault as future French ambassadress to the court of London; on the score that, being an English Peeress, her pretensions would be doubly supported; whereas this very circumstance establishes her disqualification. One of the peculiar obligations incurred by a French Ambassador to Great Britain is, that he shall bring with him a wife, daughter, or niece, to teach the English ladies how to put on their hats, and by what standard to shorten or lengthen their petticoats; and *these* are lessons which an English exclusive would never deign to receive from a countrywoman of her own—a sister of her own *caste!* The French Ambassadress *must* be Parisian to the finger tips;—'*plus Arabe qu'en Arabie;*'—*distinguée*, in short, as Madame de Dino!

A few years ago, Yankeeland sent us as her representative a plain, sturdy, sensible gentleman, whom we 'guessed' to be a 'tarnation' good sort of minister. And yet it was found impossible to continue him at his post. His Excellency's lady was considered such an 'almighty' vulgar woman among the belles of Almack's! *She* was a genuine specimen of the half-horse, half-alligator; only that (to borrow a Nigger bull) one might have fancied each half to be the largest! Well do we remember the bolster-case twisted round her head, one night at Carlton House, and mis-called a turban!

This ascendancy of Female Diplomats, by the way, is no new thing, either in this or any other country. In Madame de Sevigne's Letters, we find that wittiest satirest of the Court of Louis XIV announcing the arrival, as Ambassadress from St. James's, of the Duchess of Shrewsbury; whom the Duc de St. Simon agrees with her in describing as a half-crazy humourist, at war with all the forms and conventions of society. Yet in the course of a few months, 'Madame de Shrewsburi' became so furiously the fashion in Paris, that the ladies both of the Court and the City, with one accord, altered the national form of their head-dress to do her honor, by adopting a style of *coëffure*, which *Notre dame de Livry* had previously described as *le comble de la vulgarité!*—The first of modern female diplomatists, therefore, has effected nothing more remarkable in England than the nomination of a Premier; while an English Ambassadress boasts the far more extraordinary *tour de force* of having persuaded the ladies of Paris to assume a hideous costume;—making frights of themselves to the glorification of FEMALE DIPLOMACY!

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly; either* or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany*.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a 30

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 18 1y

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RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ½ inch, } *Flat Bars* in
200 do. 1½ do. ¾ do. } lengths of 14 to 16
40 do. 1¼ do. ¾ do. } feet counter sunk
800 do. 2 do. ¾ do. } holes, ends cut at
800 do. 2½ do. ¾ do. } an angle of 45 degrees with spli-
soon expected. } cing plates, nails
to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2⅜, 2⅝, 2⅞, 3, 3¼, 3½, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. 27 1mcowr

FOR SALE.

☞ A second hand double cylinder NAPIER PRINTING MACHINE, that will work about two thousand sheets an hour, in perfect order. It will be sold a bargain. Apply at this office.

a13 d&c

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by

a12 tf D. K. MINOR & J. E. CHALLIS.

CHOICE WINES, &c.

THE subscriber offers for sale, a large assortment of Wines consisting of

MADEIRA—Inpipes, hhds. and quarter casks, of different qualities and brands, part received direct, and part via East Indies superior old L. P. in hhds. quarter casks, and half quarters.

Also—in cases of 1, 2 and 3 dozen each, old and choice.

SHERRY WINE—Pale and brown, in wood and glass, of different qualities, from 14s to 36s part of it imported by order.

PORT WINE—In hhds. and quarter casks. Also, in cases of 1 and 2 dozen each.

HOCK WINE—A large assortment, of various brands, qualities and vintages, in cases and hampers, some very old.

FRENCH WINES.—Sparkling Champaign, of all the favorite brands, quarts and pints, with and without wax on the corks. Also, Pink Champaign.

Sauterne, Vin de Grave, and Burgundy.

Bordeaux Claret, Lafitte, Cheateax Margeaux, Leoville, St. Euphe.

Low priced, in boxes and casks.

Muscat, in boxes and small casks. Old Malaga Sherry, a fine light wine, in casks of 18 and 30 gallons each. Marseilles Madeira, in quarter casks and Indian barrels. Canary, Malmsey and Teneriffe, &c. &c.

BOTTLES.—Wine, Porter and Claret, in hampers, one gross each. Demijohns.

HIBBERT'S PORTER.—London Porter, Brown Stout, and Pale Ale, in casks of 7 dozen quarts, and 8 do. pints.

SCOTCH ALE.—Younger & Co's Pale Ale, qts. and pints, &c. &c.

SALLAD OIL—Bordeaux and Marseilles, in boxes and baskets. Olives, Capers and Anchovies.

FRUIT—Bunch and Muscatel Raisins, Almonds, E. I. Preserves and Canton Ginger.

COFFEE, &c.—Old Java and Manilla, Souchong Tea, Refine White Sugars, &c.

Part of the above are entitled to debenture, and will be sold in lots to suit purchasers. Orders received, and forwarded as directed. ROBERT GRACIE,

e27 20 Broad sreet.

UTICA AND SCHENECTADY RAILROAD COMPANY

PROPOSALS will be received until the last Monday of October next, at 12 o'clock at noon—

For grading about sixty-five miles of the Utica and Schenectady Railroad, between the Sand Ridge on Sanders' Flats in Schenectady, and the western boundary line of the town of Herkimer;

For the masonry within those limits, embracing the culverts, and the abutments and piers of the repective bridges; and

For the wooden superstructure of bridges across the Cayadutta Creek at Caughnawaga, the Garoga Creek at Palatine Church, the East Canada Creek at Manheim, the Gulph at Little Falls, and the West Canada Creek at Herkimer.

The line will be divided into sections of about one mile each, and prepared for examination, and maps, profiles and plans deposited for inspection with W. C. Young, the chief engineer, at Schenectady, ten days previous to the time above mentioned.

Blank forms of proposals will be furnished at an early day at the company's offices at Schenectady, Palatine, Little Falls and Utica.

The names of persons to whom contracts are awarded (who will not be permitted to sub-contract the same) will be made known at Schenectady on the 29th day of October, when it will be required that the grading proceed without delay, wherever, and soon as titles to the lands are acquired by the company; that the culverts and small bridges be completed by the first of August next; that the residue of the masonry and the large bridges be finished by the 1st of October thereafter; and that the grading be completed during the year 1835. Contractors to furnish security for the faithful performance of their contracts.

The use of ardent spirits to be prohibited in constructing the road.

Proposals, post paid, to be endorsed "Proposals," and containing the names of the persons offered as securities, to be addressed to the undersigned at Schenectady, or deposited at the company's office at that place. September 4, 1834.

G. M. DAVISON, Commissioner

s-17 to27 Utica and Schenectady Railroad Company.

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Tro N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 322 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

J23 1am H. BURDEN.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal-pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,

WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6c nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street,

J31 6t corner of Maidenlane.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested..

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norriet. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabethstreet, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examin hese Cars; a specimen of which may be seen on that part o he New-York and Harlæm Railroad, now in operation.

J 15 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER, Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

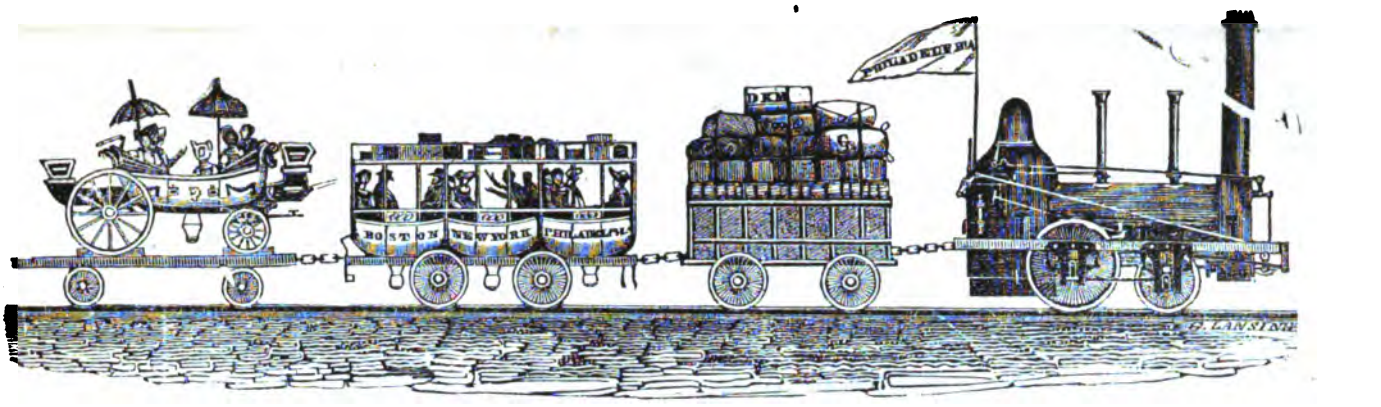
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte— As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE, Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, OCTOBER 11, 1834.

It was with the greatest pleasure that we inserted in our paper of last week the communication from the Chief Engineer of the Tuscumbia, Courtland and Decatur Railroad. In our previous descripton of this important work, to which he refers as being incorrect, we had endeavored to embody the little information regarding it that we were enabled to procure from hearsay and from the newspapers of the vicinity. Such information cannot, of course, be so accurate or detailed as is our wish to make it; but was given for want of better.

We are grateful for communications that furnish authentic details, and sincerely hope that the example thus afforded may be generally followed by others possessing similar opportunities.

American Journal of Science and Arts, for July, August, and September.—The number before us is in no wise calculated to diminish the well-earned reputation for ability which this journal has so long possessed. Amid its varied contents, we have read with the greatest pleasure the Report on the projected Geological and Topographical Survey of the State of Maryland. This report is intended only as an introductory account of the geology and hydrology of the State, with a view of inducing the Legislature, in its coming session, to authorize their more thorough investigation. There is but little doubt, we learn, but what a liberal appropriation will be made, to bring to a completion what the authors of this report have so successfully commenced. But why is it, we would here ask, that while such States as Massachusetts, Maryland, Virginia, and Tennessee, have either completed or are now carrying on surveys of a like character, our own State has done nothing towards a developement of her physical geography? As regards its "mineral constitution," we may safely say, that with the exception of the iron at Ramapo, and the salt at Salina, there is scarcely any thing known. That our State is eminently rich in wealth of this nature, from which might be drawn a fruitful source of revenue, there is no reason to doubt. Our public as well as individual interest require that that scientific information on the subject of our agricultural and manufacturing resources, which can only be obtained by means of surveys like the above, should be furnished without delay.

Richmond and Potomac Railroad.—We have conversed with Mr. Hunter, one of the engineers who have been, for some time past, engaged in experimental surveys for the route of the railroad from Richmond to Fredericksburg, and learn that the face of the country presents no serious obstacle, and that the Western Line has proved less difficult than was anticipated. We learn also that, on the western route, there has been a relinquishment of land in all instances except two or three, where the property belongs to orphan children, and that the disposition of the people, towards the work, as might be inferred from what we have stated, is exceedingly favorable. It is thought to have an advantage over the other route in a greater abundance of timber and stone, but very little in distance.

Engineers are now engaged in locating 17 miles of the road from Richmond to the ridge south of the Pamunkey—a portion common to the rival routes, which will be prepared for letting forthwith. The Board of Directors will decide very soon which course the road will take thence, and the expectation is that by February next a location of the road will be made to within 15 miles of this place. Every thing indicates that the work will be prosecuted with vigor.—[Fredericksburg paper.]

[*From the Newark Advertiser.*]

New Jersey Rail Road.—It is now two weeks since this work was opened for public use, and we learn that its success in furnishing facilities for travelling has exceeded the most sanguine anticipations. Some evidence of this may be inferred from the fact, that during the first week 2026 passengers were carried between Newark and New York; and that last week, (being the second) ther were 2548.—This number we are told includes only the actual passengers as standing on the books of the Co. and is exclusive of officers, contractors and others, some of whom constantly traverse the Road, with a view to detect and repair any little imperfections or injuries in the work; which are sometimes incident to the first operation of Rail Roads, and thus to secure the entire safety of the traveller. No accident as we are informed, has taken place, which has in the slightest degree resulted in the injnry of any person. The cracking of two cast iron wheels, and the breaking of a pair of shafts the first week, are the only casualties worth mentioning and the issue of these rather go to establish the security of this mode of conveyance, since on the occurrence the cars were promptly and gently brought to a stop, with the wheels remaining unmoved from the rails.

A foreign correspondent of the United States Gazette says—

"The steamboats, on the Clyde, are the best models in the kingdom, and much celebrated. I believe Mr. Wood, of Port Glasgow, is entitled to the most credit on this account; indeed, the models of the canal boats are his. The fastest boats and finest models are of sheet iron. This material is coming into very general use, both for steamboats and canal boats, and it is probable that, in a few years, it will supersede wood entirely. The iron boats are more buoyant, and, for the same tonnage, are made smaller, as the material takes up much less room. This is of great advantage in canal boats, where the size is limited by the locks; and I cannot help thinking that the gentlemen engaged in trading upon our canals, would find it much to their advantage, to turn their attention to boats of this description. The cost will not much exceed the expense of wooden boats, while the term of duration, and additional burthen of iron boats, to pass the same locks, will more than compensate for this additional expense."

Steam Carriage Accident.—One of the steam carriages plying from Glasgow to Paisley was upset on Tuesday, from the breaking of a wheel. The boiler burst, and the concussion was most dreadful; thirteen passengers were more or less injured, of whom Capt. E. B. Gellner, from Ireland, was killed, and Mr. Morrison, a merchant, of Gallowgate, and Mr. Blackwood, a commercial traveller, are not expected to survive. Mr. Serjeant, of Leicester, had his leg amputated. Several persons were scalded. A great sensation was produced in Paisley and Glasgow, and hundreds set out to view the scene of the disaster.—[English paper.]

Substitute for Railroads and Canals, embracing a New Plan of Roadway, combining, with the Operation of Steam Carriages, great Economy in carrying into effect a System of Internal Improvement. By ROBERT MILLS, Engineer and Architect.

[Continued from page 611.]

NO. VIII.

After what has been advanced, we must be satisfied that steam carriages will eventually, under an *improved state of roadway*, supersede every other mode of conveyance; and we are now prepared to show the practicability of forming such an *improved* way as will secure efficiency to these vehicles, and give to this new plan, from its economy, the right to be considered a proper "substitute for railroads and canals."

Let us briefly look at the cost of executing the present plans of internal improvement, and compare them with the cost of executing the plan of the "substitute" proposed.

Under the most favorable character of country, the expense of constructing a railroad, or a canal, is very considerable. The average cost for a mile of the Newcastle and Frenchtown railroad, of one track, is $22,000. The cost of the Baltimore and Ohio railroad, as far as it is completed, and including two sets of tracks, is stated to be $27,128 per mile. The Washington and Baltimore railroad, also of two tracks, is estimated to cost $50,000 a mile, besides contingencies. The Philadelphia and Columbia railroad, of two tracks, cost per mile $28,173. The railroad from Albany to Schenectady, of two tracks, cost upwards of $30,000 a mile. The Charleston (South Carolina) and Hamburgh railroad, with two tracks, will cost per mile about $100,000.* Taking the average expense of all these roads, and we have the startling result of upwards of $28,000 cost per mile. This is a serious expenditure for works of this nature, and which must operate to check the spirit of internal improvement in our country, unless remedied by the introduction of a more economical plan for constructing works of inter-communication.

If we refer to the cost of *canals*, we shall find but little difference in expense of construction, compared with railroads, under the same circumstances of country. The Chesapeake and Ohio canal has cost, as far as completed, per mile, about $30,000. The Erie canal, (New-York,) $21,000 per mile. The canals of Pennsylvania, $25,000 per mile. The James river canal, $20,000 per mile; and the Ohio canals $11,000 per mile. The canals of Great Britain cost, on an average, about $35,000 a mile.

NO. IX.

Let us for a few minutes examine into some of the *details* of cost of constructing a railroad.

Upon the 2d, 3d, 4th, and 5th divisions of the Baltimore and Ohio railroad, the expense of graduation and masonry, preparatory to laying the rails, averaged per mile, $8,540 00

The cost upon the 1st division per mile, exceeded	30,000 00
The average cost per mile, laying a double set of tracks,	11,623 00
Upon the Newcastle and Frenchtown railroad, the graduation and masonry of bridges, &c., cost per mile,	$12,000 00
Laying the rails, including horse path, per mile,	5,370 00
Purchase of land and other incidental expenses, per mile,	4,630 00
Upon the Washington and Baltimore railway, the graduation alone is estimated at per mile,	$29,557 00
The bridges, culvert, and other masonry, per mile,	9,083 00
Laying a double track of rails per mile,	15,000 00
Making up the large sum per mile, of	$53,640 00

Upon an examination of the above statements, we shall find that the *grading* constitutes a material item of expense in railroads; and in this particular, the new plan of road proposed will have a decided advantage, as the expense of grading may be greatly lessened.

Taking the Baltimore and Washington railroad as a ground work, to institute an inquiry as to the comparative expense of the two plans of road, we shall have the following results:

1st. Cost of grading, bridging, and other masonry, and laying a double track of rails on the present plan, per mile,	$53,640 00
Cost of grading, bridging, &c. and forming a double wheel track upon the new plan, per mile,	13,600 00
Difference of cost of the two plans, per mile,	$40,040 00
2d. 29 miles of railway upon the present plan, will cost, as per estimate of the engineers,	$1,555,529 00
38 miles of roadway upon the new plan proposed, will cost	546,800 00
Difference in favor of new plan,	$1,008,729 00

For the railroad, I have assumed only the distance from the Patapsco, where it would branch off from the Baltimore and Ohio railway; but for the new plan, I have taken the whole distance from city to city, so that the economy of the latter plan may be made more manifest. Were we to draw the comparison of cost between equal distances, the difference in favor of the new plan, instead of being $1,008,729, would be $1,691,489, calculating upon commencing and ending both roads at each city.

The saving of a million of dollars in this work, is certainly a matter of importance to *the* company that has undertaken it, and to the community at large, as it would necessarily reduce the expenses of travelling on the line, *in* the ratio of reduction of the cost of road.

NO. X.

The geological structure of the country between Washington and Baltimore necessarily subjects any line of road or canal laid out upon it to great expense in construction. If a million of dollars can be saved in the building of such a road, it ought certainly to be saved, as this sum could be better applied to other objects more important. I have shown in the preceding number, that were the new plan of road substituted for a railroad between these two cities, there would be a saving equal to $1,008,729.

Upon the new plan of road proposed, there would be such an improvement made upon the common or turnpike road, as would render it little inferior for the work of steam carriages to railroads; and we have seen, from the practical operation of these engines upon common roads, detailed in the former numbers, their capacity to ascend and descend inclinations of several degrees, which renders their working superior on these, than on railroads. Between Washington and Baltimore, it is not probable that the greatest inclination need exceed three degrees, and this confined to few points. Now, by referring to the working of the steam carriages on the English roads, we find that Mr. Ogle's carriage, weighing three tons, ascended a hill rising *one in six*, (nine degrees,) at sixteen and a half miles per hour, and four miles of the London road, a continued elevation, at the rate of twenty-four and a half miles per hour, loaded with people; and that his engine was capable of carrying three tons' weigh in addition to its size.

Mr. Summers added, that they have travelled in this carriage at the rate of fifteen miles per hour, with nineteen persons, up a hill, one in twelve, (four and a half degrees,) and that he has continued for four hours and a half to travel in this carriage at the rate of thirty miles per hour.

Mr. J. Stone stated, that he knew a steam carriage to draw five times its own weight nearly, partly up an inclination.

Mr. Telford ascended the hill of Shirley, (six hundred feet long,) (nine degrees pitch,) in a steam carriage, at a velocity of nearly five miles per hour, with fourteen persons on the carriage, the engine working with perfect freedom.

NO. XI.

From what has been advanced, we perceive that locomotive engines are better adapted to common than to railroads, where considerable ascents have to be overcome. The useful operation of a steam engine on a railroad ceases when the ascent equals 2 deg. 18 min., or 211 feet in the mile. Whereas, upon a common road of this inclination, the same engine would not only draw a load equal to itself, but run with a velocity of sixteen miles an hour. With half this elevation of plane, a ten-horse engine, on a railroad, will draw thirty tons without the wheels slipping. Upon a common road, this power would draw up the same elevation, nearly sixty tons. In a hilly country, therefore, the superiority of this motive power would be best manifested on common roads. And when these roads are *improved upon the plan proposed*, these engines, working on the same, in their general effect, would be found equal, if not superior, to the operation of the same power on railroads; and if we take into calculation the difference of expense of the two roads, there is no question but that the plan of road proposed ought to be adopted in preference to railway, whether for the internal commerce of a country, or the transportation of passengers.

The great difference of expense between the labor of horses and that of a steam engine, even on common roads, shows the importance of the speedy application of this power in place of animal power.* In order to estimate the comparative expense between horse and steam power, for drawing carriages on common roads, Mr. Gurney took the relative expense on one hundred miles of ground, for working a common stage coach by steam and horses, and ascertained that the carriage may be worked by *steam* at *one-fifth* the expense of horses.

NO. XII.

It will be satisfactory to many, to see the data by which Mr. Gurney determined the important fact, that the difference between horse and steam power on common roads is one-fifth in favor of the latter.

Mr. G. calculates the first cost, wear and tear of the coach *drawn*, in every respect the same in both cases. The expense of men to manage is about the same also. In one case there is a coachman and guard; in the other, an engineer and director. The difference of expense of *power*, therefore, only remains to be determined. To work a coach well with horses, one hundred miles up and one hundred miles down, once a day, will require one hundred horses. A horse a mile is the present calculation for doing the work.

Averaging each horse at $111 00 amounts to	$11,100 00
Three steam carriages will do the same work; and the expense of each will be $2,220, or for the three,	6,660 00
A saving consequently in the first outlay in capital, of	$4,440 00

* The great disparity between the cost of this railroad, compared with the others named, may be accounted for from its running through an *alluvial* and level region, and being constructed upon a new and more economical plan; peculiarly adopted to an alluvial and swamp district of country. This plan of road was designed by Mr. Mills, late Engineer of that State, and now of this city.

* Recent intelligence from Belgium states that steam carriages have been introduced with great success upon the common roads of that country; and there was little doubt of their superior economy and utility to animal power.

The wear and tear of horses may be estimated at $22.20 each per annum—and on the one hundred horses, ... $2,220 00
The wear and tear of three steam carriages will not exceed $444 per annum—and for the three per annum, ... $1,332 00

Saving in wear and tear, . . . $888 00
The expense of shoeing, keeping, provision, attendance, harness, &c. per day, of one hundred horses, about $66 67
The expense of fuel for two carriages, one up, the other down, doing the same work, will be that of one hundred bushels of coke at eleven and a half cents per bushel, say $11 50

Or, if we take twenty-three cents per mile, per horse power, it will be about the same. The expense of fuel for the steam carriages will be on an average about six cents. In some coal districts it will not exceed two cents per mile, while in other situations, it will amount to twelve cents. No expense of stables is taken into this estimate, which is considerable when compared with sheds for coke and water.

ABSTRACT.

Horse power.

Outlay for horses, ...	$11,100 00
Wear and tear of horses per ann.	1,220 00
Shoeing, keeping, attendance, provision, harness, &c., per day, for 100 horses, ...	66 60
	$13,386 60

Steam power.

Outlay for steam carriages . . .	$6,660 00
Wear and tear of steam towing carriages, ...	1,632 00
Fuel for steam carriages, half a bushel per mile travelled, at 12½ cents per bushel, ...	11 50
	$8,003 50
Balance, saving in favor of steam power, ...	$5,323 10
	$13,386 60

NO. XIII.

From the preceding calculations we find that the saving between the use of steam and horse power is nearly two-thirds in favor of the steam—and this under all the disadvantages of common roads; what may we estimate then to be the difference under an improved state of road?

Mr. Gurney stated that passengers could be carried at one-half the rate by steam carriages that they are by the common carriage, and if there were properly paved roads the expense would be reduced one half again; or, in other words, the stage-fare in a carriage propelled b steam would be only one-fourth of the stag y fare in a carriage drawn by horses.

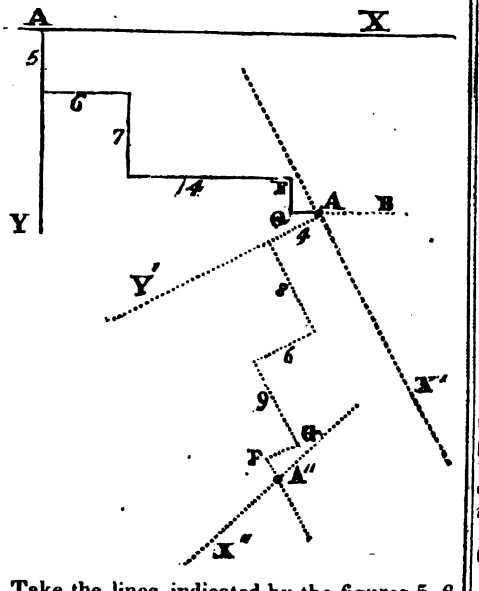
To illustrate this, we will suppose a road to be constructed between Washington and Baltimore upon the improved plan proposed, then the present stagefare between these two cities being three dollars for each passenger, might be reduced to seventy-five cents for each, and all expenses of transportation paid.* Now, upon the railroad it is judged not expedient to charge less than $2 a passenger, for the simple interest per annum on the cost of the road, independent of the cost of repairs, superintendence, steam carriages, &c., will amount to $100,000—and 60,000 passengers a year, at $2, will be only $120,000; whereas the simple interest on the cost of the new plan proposed as a substitute, will be but $33,000 per annum—and 60,000 passengers a year at $2, would be $120,000.

* Mr. Hancock estimated the expenses of his steam carriage about $15 a day, including all expenses attached to the coach, wages for engineer, steersman, fuel, oil, &c., and the distance travelled 100 miles. His carriage accommodated 15 passengers, which made the expense of each passenger one cent per mile, or $1 for 100 miles.

On the Location of Railroad Curvatures; being an Investigation of all the Principal Formulas which are required for Field Operations, in laying Curves and Tangent Lines, to pass through Given Points. By J. S. VAN DE GRAAFF. Continued from page 548. [For the American Railroad Journal.]

In a long curve it cannot be expected, in consequence of little inaccuracies which are unavoidable in chaining, deflecting, &c., that the stations will be found, when they come to be actually traced, to agree *exactly* with the point obtained for an integer chain, by the system of co-ordinate axes; but the difference will not be such as to produce any sensible derangement in subsequent parts of the curve. And it may be observed that the point $\left\{\begin{matrix} x=a+b+c+h \\ y=d+e+f+h \end{matrix}\right\}$, which was selected only for the sake of convenience in having the change of curvature to occur at the extremity of a *full chain*, when the whole line comes to be ultimately traced with the proper curvatures, will be situated within the nearest full chain of the given point $\left\{\begin{matrix} X=a+b+c \\ Y=d+e+f \end{matrix}\right\}$; and the same curve which meets the former point will also *pass through* the latter, if n be the nearest integer number *greater* than N.

The following example will more fully explain the principles contained in the present article. Let AX be a given tangent line, and A the given origin of a certain curve which is required to be laid in such a manner as to pass through the two points F and G, whose positions are given.



Take the lines indicated by the figures 5, 6, 7, and 14, to represent a system of rectangular lines, traced from the primitive origin at A, to the *first designated point* F; and let those figures indicate the length of each line respectively in chains, as determined by measurement in the field. The equations for the point F will then be, $\left\{\begin{matrix} X=6+14 \\ Y=5+7 \end{matrix}\right\}$; that is, X = 20 and Y = 12; and therefore by (XV.) Cot. ½D″ $=\frac{20}{12}=1.66667$; or, ½D″ = 30° 58′; or, D″ = 61° 56′. And again by (XV.) Sin. T $=\frac{\text{Sin. } 61°\ 56'}{40}$ $=\frac{.88240}{40}=.02206$; or, T = 1° 16′, which is the modulus of curvature necessary to trace a curve from the origin at A, passing through the first given point F. And now to determine whether the point F will coincide with an integer number of chains, in the curve, from the origin A, we have by (XVI.),

$$N=\frac{61°\ 56'}{2°\ 32'}=\frac{61.93}{2.53}=24.48;$$

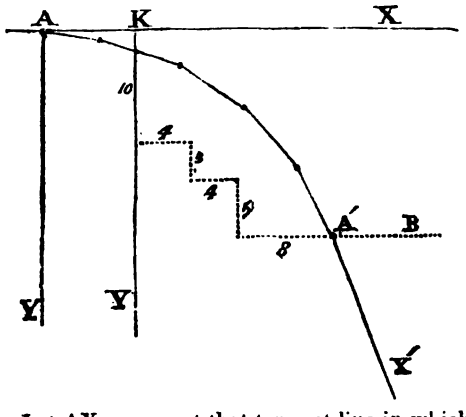
which is not an integer number. The point F, therefore, does not correspond to an integer number of chains in the curve; and a new point, A′, must in consequence be found, which will coincide with the extremity of the 25th chain *in the same curve*. We then have n = 25, T = 1° 16′; or, 2nT = 63° 20′; and by (VII.) $x=\frac{\text{Sin. } 63°\ 20'}{2\text{ Sin. } 1°16'}=\frac{.89363}{.04422}=20.21$ chains, $y=\frac{1-\text{Cos. } 63°20'}{2\text{ Sin. } 1°16'}=\frac{.55120}{.04422}=12.47$ chains. Hence $h=x-X=+0.21$, and $k=y-Y=+0.47$. Let, therefore, the two rectangular lines FQ and QA be traced in a manner similar to the former, and equal to .47 and .21 of a chain respectively, taking care to preserve their directions by references more remote; and a new station A′ will be thus obtained, coinciding with the extremity of the 25th chain in the same curve, which passes from the primitive origin at A through the first given point F. The instrument may now be placed at A′, and directed into the line A′B, parallel to the primitive tangent AX; and because 2nT = 63° 20′, therefore, agreeably to (IV.), deflect the angle BA′X′ = 63° 20′, and the instrument will then indicate the true direction A′X′, which is *tangent at the station* A′, to the curve subsequently to be traced from the primitive origin at A.

Now, take A′X′ and A′Y′, for a new system of rectangular co-ordinate axes, agreeably to which let a second system of rectangular lines be traced from the new origin at A′, and terminating in the *second given point* G, and indicated in chains by the figures 4, 8, 6, 9, respectively, as before. The equations for the point G will then be $\left\{\begin{matrix} X=8+9 \\ Y=4+6 \end{matrix}\right\}$; that is, X = 17, and Y = 10; and therefore by (XV.) Cot. ½D″ $=\frac{17}{10}=1.70000$; or, ½D″ = 30° 28′; or, D″ = 60° 56′. And again by (XV.), Sin. T $=\frac{\text{Sin. } 60°\ 56'}{34}=\frac{.87406}{34}=.02571$; or T = 1° 28′, which is the modulus of curvature necessary to trace a curve from the new origin at A′, passing through the second given point G. And now to determine whether the point G will coincide with an integer number of chains in the curve, from the new origin at A′, we have by (XVI.), $N=\frac{60°\ 56'}{2°\ 56'}=\frac{60.93}{2.93}=20.80$; which is not an integer number. The point G, therefore, does not correspond to an integer number of chains in the curve; and a new point, A″, must in consequence be found, which will coincide with the extremity of the 21st chain, *in the same curve*. We then have, n = 21, T = 1° 28′: or, 2nT = 61° 36′; and by (VII.), $x=\frac{\text{Sin. } 61°\ 36'}{2\text{ Sin. } 1°\ 28'}=\frac{.87965}{.05120}=17.18$ chains, $y=\frac{1-\text{cos. } 61°\ 36'}{2\text{ sin. } 1°\ 36'}=\frac{.52438}{.05120}=10.26$ chains. Hence, $h=x-X=+0.18$, and $k=y-Y=+0.24$. Let, therefore, the two rectangular lines GP and PA″ be traced in a manner similar to the former, and equal to .24 and .18 of a chain respectively; and a new station, A″, will be thus obtained, coinciding with the extremity of the 21st chain in the same curve which passes from the new origin A′, through the second given point G. The instrument may now be placed at A″, and directed into the line A″D, parallel to the first new tangent A′X′; and because 2nT = 61° 36′, therefore, agreeably to (IV.), deflect the angle DA″X″ = 61° 36′, and the instrument will then indicate the true direction A″X″, which is *tangent at the station* A″, to the curve subsequently to be traced from its proper origin at A′.

The calculations of the two cases in this example have been *made out in full*, and expressed verbatim, with the exception only of such words as were peculiar to each case, in order that the principle might be at once comprehended by *all*; for it constitutes one of the most important *systems of operations* connected

with the subject of curvatures, when properly understood and skilfully managed.

18. It is proposed to determine the modulus of curvature which will trace a curve from a given tangent line, and from a given *point therein*, in such a manner as to touch another right line given in position.



Let AX represent that tangent line in which the origin of the required curve is *unknown*, and A′X′ that in which the origin of the curve is given at the point A′. Select any arbitrary point K, in the *former* tangent line AX, for the origin of a system of rectangular co-ordinate axes KX, KY: and parallel respectively to those axes let a system of rectangular lines be traced from the origin of the co-ordinates at K, and terminating at that *origin of the curve* which is given in the other tangent line A′X′ at the point A′; and by means of those rectangular lines let the angle BA′X′ be *measured*, and denoted by D, and which will express the inclination of the two given tangents AX and A′X′ to each other. Take the equations

$$\left.\begin{array}{l} X = a + b + c + \text{&c.} \\ Y = d + e + f + \text{&c.} \end{array}\right\},$$

as *given* by means of those rectangular lines, and explained in the preceding articles. It is then very evident that the value of the ordinate Y, as thus determined, will not, in any manner whatever, depend upon the point which was selected in the tangent line AX, for the *origin of the co-ordinates;* and consequently that value of Y will express the true ordinate which corresponds with the given point A′ in the required curve, as estimated from that *origin of the curve*, which is required to be situated somewhere in the given tangent line AX. And it hence follows from (VII.), that, $Y = \frac{1 - \text{Cos. } 2nT}{2 \text{ Sin. } T}$. But, $D = 2nT$, as appears from (IV.); and this value being substituted in the expression for Y, the following formula will result:

$$\text{Sin. } T = \frac{1 - \text{Cos. } D}{2Y}. \qquad \text{(XVII.)}$$

And thus the modulus of curvature of the required curve may be easily computed after tracing a system of rectangular lines

$$\left.\begin{array}{l} X = a + b + c + \text{&c.} \\ Y = d + e + f + \text{&c.} \end{array}\right\}.$$

But that origin of the required curve, which is situated somewhere in the given tangent line AX, will also in some cases be wanted. Let that origin be at A, and put $\propto = -AK$; and then $X = \propto$, and Y will evidently be the co-ordinates of the point A′, as estimated from the origin A, and axes AX, AY. Hence, by (XIII.) $\text{Cot. } \frac{1}{2}D = \frac{X = \propto}{Y}$; or, eliminating $\propto$; the result is,

$$\propto = Y \times \text{Cot. } \tfrac{1}{2}D. - X. \qquad \text{(XVIII.)}$$

Which makes the required origin known; but in using this formula, it must be observed, that the hypothesis here assumed is, that $\propto$ is considered *positive* when it is measured immediately *opposite* to the direction of X from the selected origin of the given co-ordinates X and Y; and consequently, when $\propto$ comes out *negative* from (XVIII.), it must be taken in a direction *coinciding* with X.

Example. Let a system of rectangular lines be traced in a manner similar to those represented upon the figure by the figures 10, 4, 3, &c.; and let those figures denote the length of each line in chains. The angle BA′X′ being measured, let it be found $= 60°$.

In this case, then, $\left.\begin{array}{l} X = 4\,4 + 5 \\ Y = 10\,3 + 8 \end{array}\right\}$; that is, X = 16, and Y = 18. And,

$$\text{Sin. } T = \frac{1 - \text{Cos. } 60°}{36} = \frac{.5000}{36} = .01390;$$

from which is found $T = 0° 48' =$ modulus of curvature of the required curve. To find the position of the origin A, we have $\propto = 18 \times \text{Cot. } 30° - 16 = 18 \times 1.732 - 16 = 31.18 - 16 = +15.18$. Hence measure 15.18 chains from the selected point K, and *backward* as regards the axis KX, of X. The required point A will be then obtained; from which a curve being traced by means of the modulus of curvature 0° 48′ it will meet the given point A′, and come into the given tangent line A′X′. Or, vice versa, being traced from the given point A′ and from the given tangent line A′X′, it will *touch* the other given right line AX at the point A.

On the Arrangement of Cylindric Steam Boilers.

To the Editor of the Mechanics' Magazine:

Sir,—It is well known that a cylindric steam boiler, thirty inches in diameter, made of wrought iron plates one fourth of an inch thick, will sustain a pressure of more than one hundred pounds to the square inch. Of course, a cylinder of the same material, three inches in diameter, will sustain an equal pressure, although the iron of which it is made be but one fortieth of an inch thick; the thickness and strength of the iron being in the same proportion to the diameter as those of the thirty inch cylinder. A thirty inch boiler, eighteen feet long, and presenting one third part of its surface to the action of the fire, will produce about six horse power of steam: from which it may be inferred, that thirty-six cylinders, each being thirty inches long and three inches in diameter, and presenting two thirds of their surface to the action of fire, will also give a six horse power of steam; yet the weight of the thirty-six cylinders may be less than one sixtieth part of that of one large cylinder of the dimensions above specified. Several inventors have endeavored to avail themselves of this principle, but I know of no instance in which they have fairly succeeded in evading the difficulties attending the construction of a boiler consisting of many cylinders or pipes. In one instance, the pipes were so small that they soon became smoked; in another, they were arranged horizontally, consequently the steam could not readily escape; and in both, the pipes have been connected with cross-pipes by brazing, which rendered it difficult to keep them clean from the sediment which always accumulates in boilers; or to remove one without disturbing the arrangement of the rest. With this view of the subject, I have lately constructed a boiler on this principle, which appears likely to be useful for locomotives at least. It produces rather more than one horse power of steam, will sustain a pressure of three hundred pounds to an inch, weighs less than eighty pounds, and cost, (made of copper,) less than sixty dollars; yet so constructed, that the steam rises freely, and that either of the cylinders may be removed occasionally and replaced again in five minutes. The following is the specification of a boiler of the same construction, but of larger dimensions, and calculated for three horse power.

Twenty-four cylinders, made of sheet iron or copper, each being thirteen inches in length, and two and a half inches in diameter, are arranged vertically in two rows, parallel to each other, the cylinders in each row being half an inch apart, and the space between the two rows being eight inches. Each cylinder has a cast metal head at each end, secured by revits, or by brazing; and from the centre of which projects a tube an inch and a half long and one inch in diameter; each tube having ears projecting half an inch from two opposite sides, by which the tubes are secured by screws to the sides of four pipes, which are placed horizontally, parallel to each other, one at the top and another at the bottom of each row of cylinders. These tubes may otherwise be secured to the pipes, by having an iron strap bent over each tube, and a screw passing through each end of each strap into the side of the pipe. One side of each tube is nicely fitted to the side of the pipe to which it is attached; and the pipe and tube having each a corresponding orifice at the point of contact, an internal communication is effected between each cylinder and each pipe connected with each row. These parallel pipes, which are about one inch and a half in diameter, are also connected by cross-pipes at each end. The cross-pipes are cast with a cube at each end, or at the point of connection with the side-pipes; and instead of being open at the ends, have an opening on the side of each cube of a size to admit the end of the side-pipe; and a small iron rod, passing through the length of the side-pipe, and through the cube at each end, has a square head at one end, and a screw and nut at the other, by which the opposite cubes are drawn up to the ends of the pipe. Note—The length and size of the cylinders, the number of cylinders in a row, or the number of rows, may be varied as occasion may require.

The lower part of the cylinders are inclosed in a sheet iron furnace or stove, the height of which is equal to two thirds of that of the cylinders. The top of the stove being fitted to the several rows of cylinders, and the cylinders being filled two thirds full of water, the fire within the stove cannot approach them above the surface of the water. Between the two rows (or each two rows) of cylinders, at the bottom, is a grate, which rests on the bottom pipes; and at the top of the stove a horizontal door, by which the stove is supplied with fuel. Through one side of the stove are several small apertures for the induction of air; and attached to the opposite side is a funnel for the eduction of smoke. Steam-pipes, gauge-cocks, &c. may be attached to either of the pipes or cylinders, as may be most convenient.

I claim as original the arrangement of the cylinders, the method of attaching them to the pipes, and that of connecting the side-pipes with the cross-pipes.

Yours, respectfully,

Rufus Porter.

Billerica, Mass., Aug. 22, 1834.

[*From the Buffalo Whig.*]

State's Prison Monopoly.—Since the Mechanic's Convention, upon the subject of our States' Prison labor, some notice of the facts, it seems, is deemed advisable, by "the powers that be." Printed circulars have been dcspatched by the keeper of the Auburn Prison, of which a copy follows, below. Several have been received in this city, and they have probably gone to all parts of the State. The motive of this movement is left to be inferred. We more

than suspect it to be none of the best. The circular follows:

State Prison, Auburn, August, 1834.

Dear Sir: You are doubtless aware that latterly considerable excitement has existed in many parts of the State, relative to the employment of convicts in mechanical labor in the State Prisons. Feeling deeply the importance of the subject, as connected with our penitentiary institutions, and anxious to learn, as far as possible, the effect which that labor has upon the citizen mechanics' interests, as well as the effects of our prison system upon our discharged convicts, allow me to solicit your answers to the following interrogatories:

1st. Are you acquainted with any persons who have been discharged from either of the State Prisons? and if so, what are their names, places of residence, and what has been their conduct, habits, and character, since their discharge; also before conviction, if known?

2d. What branches of mechanical or other business do they prosecute, and to what extent?

3d. Are there any articles manufactured in the prisons of the State sold in your place? and if so, what kinds, and to what amount per annum?

4th. Does the mechanical business of the prisons injuriously affect the interests of the mechanics of your place? and if so, is it in the price or the quantity brought into your market, or any other cause?

The information above sought, is not merely important to the State, but to the United States, as well as to European nations, inasmuch as it involves the permanency of a system of prison discipline, which has been considered the best extant, and which, in truth, has constituted a new era in the punishment and reformation of criminals in this country, and is now receiving the attention of the governments of Europe.

I therefore trust the subject will be considered of sufficient importance to claim your early and serious attention.

I am, with great respect, your obedient servant,

Levi Lewis, Agent and Keeper.

To —— ——, Buffalo, Erie Co.

The following answers to the third and fourth interrogatories, were prepared by one of our mechanics, to be forwarded to the keeper of the Prison:

Answer to third interrogatory.

There are a number of articles sold in Buffalo, which are manufactured in the prisons of this State, to wit: joiners' tools, saddlery of all kinds, both brass and plated, hames, saddle trees; copper ware, such as furniture for cook stoves, &c.; blacksmith work, of various kinds, such as iron doors, grates, bars, bolts, locks, chains, and hinges; wooden ware, such as tubs, pails, churns, &c.; ready made clothing, and it is believed boots and shoes; combs, and several other articles, some of which are purchased in New-York, at second hand, without the purchaser's being aware of the articles being manufactured in the prisons.

The amount of articles sold in this city the last year, from the best data that can be obtained, exceeds fifteen thousand dollars—one house disposing of about one fourth part of this amount.

Answer to the fourth interrogatory.

The several mechanical branches with which the prison wares have come into competition, are seriously injured, and it is said some establishments have been broken up in consequence, and that others must follow.

It is believed that the low price at which the prison wares are sold, is the principal cause of complaint, it being on some articles but little above the price of the raw material.

The manufacture of some articles which are carried on pretty extensively, have, in consequence of the introduction of the same kind of articles manufactured in the prisons, been entirely discontinued—an establishment for manufacturing Hames, employing from 10 to 12 workmen in 1830, has been entirely abandoned.

Copper furniture, for cooking stoves, manufactured in the prisons, was introduced into this city in 1833, and offered at prices considerably below what it cost to manufacture it. The consequence has been, that the prison ware is now extensively sold, and will, if this is persisted in, supersede all other. There are about 6 or 8 establishments now in Buffalo for the manufacture of copper, tin and sheet iron ware, employing about 50 workmen. The conductors of these establishments say it is impossible for them to compete with prison prices. The iron work for the new county prison erected in 1832 and 3, was wrought at the Auburn Prison, consisting of doors, grates, locks, &c. &c. amounting to more than two thousand dollars.

Whether any answers or queries one and two have been returned, we are not informed. We were recently acquainted with a very worthy mechanic, in this city, now deceased, who, previously to his residence here, was employed, in superintending the blacksmiths, in the Auburn prison. That trade he followed here; and from his knowledge of the discipline of the prison, and the signs by which the prisoners, (not being allowed to speak) call for what they need, he often detected those he had employed, as graduates of the Auburn Institution. He informed us that he detected, in this way, from fifteen to twenty of these, in the course of two years. Several of them proved most arrant knaves; and no one so demeaned himself as to retain his place longer than a few days. Some of them pilfered his small tools, and one broke open his shop at night and robbed it. A chair-maker, also at work here, plundered his employer and decamped, who was from the same school.

In short, reformation, we believe, can seldom be found to have resulted from our prison system.

SURVEY OF THE COAST OF THE UNITED STATES, No. I.

It is, perhaps, known to some of our readerr, that a systematic survey of the Coast of the United States is at present going on. This undertaking, of so much importance to our mercantile marine and to our navy, has been recently recalled to our recollection by a conversation with one who has had an opportunity of examining its details, and of assisting at one of its most important operations, and from him we have the following statements: "The director of the surveys is a gentleman well known to the scientific world, Mr. *F. R. Hassler*, and whose high attainments in astronomy, and the application of Mathematics to useful purposes, are most fully appreciated by those who are best qualified to judge of such acquirements. While still a young man and a stranger, he was chosen by Jefferson and Gallatin to perform this task, and the unanimous voice of the scientific men of both hemispheres has sanctioned their judgment.

It is not our present purpose to explain how it happened that the survey ordered by a law of 1807, was not commenced until 1816, nor why its progress was interrupted after the lapse of no more than a single summer. It is sufficient to say, that in spite of circumstances the most unfavorable, in the absence of any practical assistants, and defiance of an opposition which we shall in charity call ignorant, more was done by Hassler in that single campaign, than had ever been before effected in an equal space of time, in the surveys of either France or England. The operations of this summer have since served as a model to more than one European nation in works of a similar character.

The survey of 1816 was commenced in the vicinity of New York, and in its operations included the whole the neighbourhood of our city; and it is perhaps remarkable, that an examination of the figure of our coast in reference to a scientific operation, should have pointed to that very spot as most important, which the subsequent increase of its commerce has made the mart of the Western hemisphere.

Surveys of the character of which we speak, are necessarily performed by the united aids of astronomic observation and terrestrial measures. The first part of the process consists in forming upon the ground a network of great triangles, whose sides may be as large as the eye, when aided by the telescope, can scan. Every angle of these triangles must be measured, and the inclination of many of their sides to the Meridian exactly ascertained. The length of one side of a single triangle must be known, in order that the rest may be computed; and it will be obvious that upon the truth with which the accuracy of this base is determined, the certainty with which the position of distant points can be defined will wholly depend. The attention of Mr. Hassler himself has for the present summer been principally directed to the measurement of such a base. For this purpose he has selected a line upon the southern beach of Long Island, near Fire Island Inlet. Here, at the very level of the sea, he has found a base exceeding in length any ever before measured, and which requires neither correction nor reduction. To ensure the necessary accuracy in this important task, he has brought in aid methods of his own invention, superior to any hitherto furnished by scientific research. We have the pleasure to be able to say that it is some weeks since this important part of his work has been completed, and the data furnished for defining in itinerary measure the great outlines of the Coast and Harbors of New Jersey, New York and Connecticut; a large portion of the respective seaboards of which States had been previously enveloped in his triangles. Pending this operation, two parties, directed by civil engineers in the employ of the government, have been busy in forming a series of secondary triangles, embracing points not seen from the summits of those of the greater series; another under the command of a naval officer, and a fourth led by a civil Engineer, are now organizing, the one to take soundings, the other to fill up the topographical details.—The work in fact, which has hitherto been confined to preliminary scientific observations, of which only the initiated could see the value, is now in that state in which it will speedily develope its practical and useful bearings. Every new step in the scientific part of the survey will hereafter give increased space for the services of civil, military and naval engineers, and the extent to which they may be employed will depend upon the liberality of the appropriations.

Compared with similar works in Europe, the writer was struck with the economy and strict attention to husband the resources furnished by the government, manifested by Mr. Hassler; in spite of this he could not help observing that the usefulness of Mr. H. and the progress of the work were checked by the inadequacy of the allowances made for his personal expenses, and by the necessity of corresponding with Washington in relation to petty expenditures, of which none but the director of the work itself is competent to judge. Of the precise amount of these difficulties we are unable to judge, but as we know that Mr. Hassler sacrificed a competence in his exertions to organize the survey of the coast at the beginning, we are not without our fears that the same species of bureaucratic influence which caused the interruption of the work in 1816, and thus deprived the country of the benefit of much of its earlier expenditures, may again be efficient in delaying, if not in wholly frustrating the hopes now justly entertained of important national benefits. We witnessed on that occasion, under the pretence of economy, the fruits of several years of preparation entirely lost; instruments, unequalled in structure, destroyed by the unskilful hands to which they were entrusted for keeping, or worn out in operations for which they were never intended; and a library, both public and private, that money can never again collect, dispersed to the winds; not to mention the loss of property and life which the unexplored portions of our coast have witnessed in the interim. These enormous public and private losses were caused by an attempt to save less than a thousand dollars of salary and travelling expenses.

It has luckily happened that when the gross error which had been committed was made manifest, Mr. Hassler was still alive, and in the enjoyment of his faculties; otherwise, we should have been compelled to have had recourse to Europe for a substitute, or to have sent a person there to acquire the practice of observation, for our country as yet possesses none of those establishments, and carries on none of those great operations, in which alone the competent skill can be attained. The survey of the coast may, and probably will, in its progress, form persons qualified to continue it, but the physical and moral qualities, necessary to execute such a task successfully, are rare in all countries, and would probably in ours be directed to more lucrative pursuits. A thorough and complete mathematical education, an intimate and accurate knowledge of all the physical sciences, a love of them for their own sake, a constitution to bear unshaken, constant exposure to our climate, the activity and energy of the partisan, with the *coup d'œil* of the general, do not form a combination of usual occurrence, and yet the want of any one of these requisites, would probably unfit a person for conducting such a work. If to this we add that the person thus nobly endowed, by nature and education, must work for a bare subsistence, under every probability of a premature old age, we can see how rare must be those who will engage in such an occupation."

On the Comparative Value and Importance of Mathematical Science, and on the Pretensions of its Professors.

[From the London Mechanics' Magazine.]

Sir,—Whilst occupied in writing a reply to Kinclaven, I was led to indulge in some observations on the intellectual grade and practical value which ought to be assigned to mathematical acquirements, and on the overweening pretensions of some of the mathematicians; but these remarks became so much extended under my hand, that I have thought it best to give them to you under another form.

I am sir, yours respectfully,

Benj. Cheverton.

Men's minds appear to be differently constituted in regard to the investigation of things. Whilst the generality take a view of a subject merely as a particular case, and reason upon and examine it only as connected with its more immediate causes and consequences, the profound inquirer analyses it, to discover the law or principle which pervades it in common with many others; to trace and connect it with those of dissimilar aspect; to show that in the abstract they belong to one common truth, though in the concrete, or in their actual existence, produced by the modifying agencies of their peculiar circumstances, they present appearances which apparently have no relation to each other. Such are the minds who have for their high aim the extension of the principles of knowledge; but though peculiarly fitted for discovery, they are not the best qualified to bring science down to practical application, or even to make it literally accord with matter of fact. In disentangling the complications resulting from concomitant agencies, they are so intent on arriving at the most general truths, so systematically disregardful of the separate consideration of those agencies, and so much in the habit of keeping the analysis disencumbered of all ideas not comprised in the upward leading train, that when, by a course of synthetical reasoning, they would turn their discovered principles to account, and build up a system on their foundation, they too much exclude the operation of the subordinate laws which concur in influencing, and more immediately regulate, the ultimate result, and which give to things the form and appearance which they present. Their conclusions, though correctly drawn, are true only in part, and by assumption and limitation, true mentally, but not materially, or as found in actual existence.

But there is another class of minds of nearly the same stamp and mould as the former, who, though not taking the like grand and original views, are yet of a kindred spirit. The former act the part of pioneers, but these take to the circumstantials, and bring into subjection what the others merely pass by. They fill up that outline of a science or system which the former, in the discovery of its most general law, was content merely to trace; they bring the analysis to bear on all the relations implicated; weigh, balance, and proportion the conflicting agencies; and are thus enabled to perfect the subsequent synthesis in all its details, to take a complete view of the subject in all its parts, and a comprehensive one in all its bearings, and to bring forth to view the modified results, the exceptions and the anomalies, as illustrations of, and confirming attestations to, the fraudulent truths which at first sight they may appear to invalidate.

Both these classes of men are philosophers, the distinction between them having reference to a tendency to generalize, rather than to the usefulness of their labors, or the rank in which they ought to stand; but they *may not* be mathematicians, that depending on the circumstance whether the science of quantity is required in their investigations. These last, therefore, form a third class, whose object is less the extension and perfection of science or system, than the cultivation of the means thereof, so far as the relations of quantity are concerned.

The mathematicians—I mean mere mathematicians—are doubtless valuable members of the body scientific, but some among them, (the least generally informed,) are sadly inclined to over-estimate the honor of their station, and the comparative value and importance of their labors. In the great field of science, to say nothing of the greater field of knowledge, they occupy merely one of its sections, they facilitate and abridge the work of some, and co-operate in the work of others; but they are neither the pioneers nor the finishers of the operations going on around. Subsidiary and assistant to original investigation, the *science of quantity* is of important service, but if put forward and esteemed as the *science of things*, it is worse than useless, and many who might have made good philosophers, have been spoiled by the false glare reflected from their own doings being taken for the true light thrown on Nature's works. The lines and characters with which mathematical operations are conducted, and whose results, though only abstractions, are too often confounded and identified with realities, are not only the mere symbols of things, but the symbols merely of one or two qualities in things; and therefore, though the conclusions are true, rigorously true, as to the signs, they are false as to the things themselves, when regarded in their ultimate modified results, from the influence of those qualities or accidents which the mathematician does not or cannot symbolise—which he does not, because the complication arising from their reciprocal actions exceeds and defies his means—which he cannot, because in regard to some of them there is not sufficient analogy in the types to warrant the deductions they afford being transferred to the archetypes. Even as to those said qualities (extension and individuality) which form the subject matter of mathematics, the investigation is often limited, and therefore imperfect, from the impossibility of extending the analysis to all the ramifications which branch forth from it. The mathematician arrives at the truth, and nothing but the truth, but not at the whole truth—not even at the whole of the only kind of truth which symbols give. When, however, the case is so simple that the investigation comprehends all the possible relations belonging to those qualities, and the only result sought for in things is a knowledge of those relations, then it may be said, and only then, that the conclusions of the science are not only indubitable, but identical with realities—but what does not this limitation exclude?

The mathematician has a little, a very little, world of his own, in which every thing is in the utmost order, subject to known laws, involving definite and foreseen action, liable to no interference not calculated on and provided for, and the whole capable of coming within his own powers to regulate and govern according to assigned rules; for things which cannot be made amenable to his jurisdiction are ejected from his dominion. He therefore admits nothing of unknown power, or which may exert an influence which he cannot see, and introduce uncertainty and casualty within his precincts. Hence, also, many agencies, though well understood, are rejected by him, lest they should prove too numerous for his perfect cognisance, and lest more subordinate laws should obtain than he can see and understand their bearings; or else he accepts only the first modifications which they may produce, and then casts them out altogether, whereby he avoids the many puzzling anomalies and exceptions which would proceed from their mutual actions. Hence, also, he ejects, as they arise, whatever among the collateral effects may complicate and embarrass the more direct train of results. Thus he sees and comprehends every thing, the whole is within his grasp, demonstration attends him at every step, aberrations are impossible, contingencies are out of the question, all results are naked to his sight, and his prescience embraces all, because his knowledge is certain and perfect, and extends to all. But, on the other hand, this is a world of curtailment and exclusion, in which nature is deprived of her just proportions, and of many of her endowments—it is a world of meagre forms and distorted shapes; and thus feeble man, failing to stretch his powers to a comprehension of the full length and breadth and depth of things, makes the things themselves conform to the extent of his own puny faculties, and then, in all the self-sufficiency of pride, exclaims—behold! this is nature!*

When the mathematician comes forth from this tiny world of his into the world of realities, he is bewildered with the multiplicity of its objects, he is confounded with the immensity of their relations and mutual aspects. He looks for certainty, and can scarcely find probability. Accustomed to demonstrate, he is unqualified to estimate; and in the habit of concentrating his attention to a single, unbroken, unerring, and necessary chain of inferences, and having the power permanently to record its every link, and fix the otherwise fleeting convictions of certainty, he is unfitted to retain a steady and expansive view of several collateral lines of action, to balance conflicting influences, to adjust their proportions, and from the whole to educe the nearest to the true conclusion which only actual results can make to appear. Emerging from his world of abstract ideas, if indeed it be so much as this, he finds the real world, and the things thereof, to be a perfect enigma. He can follow, it may be, in the track of those who have unravelled it a little; but he has no powers of himself to unravel it further. Desirous, however, of doing something, though it may be only after his own method, suiting, therefore, the subject to his means and habits, he seizes a few of the most manageable facts; and if they are not to him already isolated, by his ignorance of the ties by which

* The arrogance of some of the naturalists is astonishing. They sit in judgment on nature, criticise her works, and talk of the attempts in which she has failed to perfect her plan. After all that has been said of the inductive philosophy, and of our being the humble disciples of nature, the race of the king of Castile is not yet extinct.

they with all things are bound together, he takes care to sever their connection with disturbing causes, and to rid himself of all embarrassing extraneous influences. If his facts are not sufficiently fruitful of principles, he can eke out his case with a few postulates; and if they are untractable, he can frame an hypothesis which shall present as nearly as possible the same appearances. He then proceeds in the most lucid and masterly manner, to build his system scientifically. All its parts are in harmony, all its conclusions are demonstrable. His penchant for clearness, order, and certainty, is gratified, and he fondly flatters himself that the results which he brings forth are conformable to nature. He does not consider that the harmony and clearness which he so much admires, gives every reason to suspect that he is entirely wrong; for the one may arise from every element of discord being rejected, and the other from those narrow and contracted views, which, by reason of our limited faculties, we are only able to take when absolute certainty is to be the result. Professor Sedgwick, whose scientific pursuits tend to enlarge and expand the mind, has a just observation in a recent publication of his, which, though having an immediate application to one particular subject, is by no means foreign to the tenor of the present remarks: "To suppose that we can reason up to a First Cause in moral questions—that we can reach some simple principle, whence we can descend with logical precision to all the complicated duties of a social being, is to misapprehend the nature of our faculties, and utterly mistake the relation we bear both to God and man. Such a system may delight by its clearness, and flatter our pride, because it appears to bring all our duties within our narrow grasp; *but it is clear only because it is shallow, while a better system may seem darker only because it is more profound.*" Thus, the mere mathematician is disqualified by his prejudices, his habits, and the tutored bias of his mind, to look at the world of nature as it is. For, however paradoxical it may appear, views may be taken of it, which, though less exact than his, may be more complete, and though less certain, may be more probable. He is really better qualified to comprehend an entire system of worlds, so far as it may be explored by others possessed of a superior order of intellectual gifts—for the only point of view in which he can regard them, is merely as individual entities, whose dependence on each other is governed by one universal law of influence, and whose aberrations and disturbances, therefore, are not in the main beyond his scope. But in respect to mundane affairs, he has not the *coup d'œil*, the tact, or the *intuitive* perception, as it appears to be—though it is not that, nor is it innate, except so far as natural aptitude is concerned; but it is a deliberate process, and an acquirement derived from long habituated reaches of comprehensive thought, and faculties well disciplined by suitable practice—he has not, I say, that fine *eventual* perception, as it may with more propriety be called, which includes the whole implication of things, their mutual actions, and their final issue, whereby others are enabled to combine vastly, if not minutely, to establish something like order and gradation in the gross, if not in the detail; to foresee with a degree of certainty, though it may be with some obscurity; and to catch the shadows, if not the lineaments, of unknown forms. Such powers in any perfection are not often combined with high mathematical attributes, for they are of diverse tendency; but when they are united and directed with a combined effort to connect systematically the wide survey with first principles, they mark not only the true but the pre-eminent philosopher. Such was Newton. In his profound inquiries into the phenomena of nature, requiring new methods of mathematical investigation, his merits in that respect are, no doubt, eminently conspicuous; but yet, as the founder of a system, it is not so much the mathematician as the philosopher which shines forth in him. What a contrast there is between him and Descartes. With what sagacity he brought to light slight and hidden analogies, and what wisdom is displayed even in his scholia and his queries. His very conjectures partake of the nature of science. How extraordinary was that concerning the diamond; and who can say that his idea concerning the cause of gravitation may not yet be verified, or at least rendered highly probable?

The tendency of mathematical studies to unfit the mathematician for the general study of nature, and for investigation into the complex structure of human affairs, has now been stated—in very general terms confessedly, but that of course was unavoidable, unless there was an intention to write a complete dissertation on the subject. There is, however, another cause which lies at the root of that unfitness, peculiar to the mere mathematician. It consists in the very structure of the mind, that is, in the inequality of his faculties. "In almost all the instances of mental superiority," says Dr. Chalmers, "it will be found that it is a superiority above the average level of the species in but one thing—or that arises from the predominance of one faculty over all the rest." We may extend this remark, and say that nature is seldom perfect in opposite directions in the same individual, and that if her bounty flows strongly in any particular channel, it is generally at the *expense* of the diverging streams. This is so remarkably the case in regard to the mathematician, that deficiency in judgment is proverbially ascribed to him. Now judgment, in a popular sense, is a collective word for the several faculties which concern not the abstract ideas, but the realities of things in their actual forms. Thus both the congenital deficiency and the predisposition mutually concur with the habit which they produce to make the mere mathematician what he is—utterly unqualified to investigate any thing out of his own province. But properly to establish the point of his *natural* inaptitude would lead me too far into metaphysical, and, as some would think, into phrenological disquisitions.

Nature may, in some instances, bestow her gifts with as balanced as a bounteous hand; but then the study of mathematics, in all its fullness, is so engrossing, demanding so large a portion of time, as to preclude the generality of its students from the acquirement of that extensive knowledge of things and their relations which is necessary to furnish the philosophic mind. "Mathematics," says Duncan in his Logic, "is an engaging study; and men who apply themselves that way so wholly plunge into it, that they are, for the most part, but little acquainted with other branches of knowledge. Even such as are alleged to have excelled in their own profession, and to have discovered themselves perfect masters of the art of reasoning, have not always been happy in treating upon other subjects; but rather fallen short, not only of what might naturally have been expected from them, but of many writers much less exercised in the rules of argumentation. Because, however perfect they may be in the art of reasoning, yet wanting here those intermediate ideas, which are necessary to furnish out a due train of propositions, all their skill and ability fails them, for a bare knowledge of the rules are not sufficient—we must further have materials whereunto to apply them."

Barbeyrac, in the preface to his translation of Grotius, "De Jure Belli et Pacis," informs us, says Kirwan, that a mathematician undertook to refute it; but of this refutation he says, "on n'a jamais rien vu de plus pitoyable, et on seroit surpris qu'un mathematicien put si mal raisonner, si l'on n'avoit d'autres exemples bien plus illustres, qui montrent clairment que l'etude des mathematiques, ne rend pas toujours l'esprit plus juste en matiere des choses qui sont hors de la sphere de ces sciences." And Condillac, according to the same author, says, "nous avons quatre metaphysiciens celebres, Descartes, Malbranche, Leibnitz, et Locke; le dernier et le seul qui ne fut pas geometre, et de combien n'est il pas superieur aux trois autres?"

It cannot, however, be denied that a few mathematicians have been philosophers; or, rather, that some philosophers have also been mathematicians. Men possessed of an equilibrium of the faculties, and endowed with sufficient energy to sustain and invigorate them all—men of panoramic as well as of microscopic vision—men who extend their views beyond the mere rules, the elegant abridgments, and the ingenious artifices of the science, and who, valuing them only as means to a nobler end, merge the powers of the analyst in subservience to the grand objects of philosophy. It is from men like these that the mere mathematician has received a reflected lustre, and a consideration which is not his due. But the far greater number of philosophers, and the most useful ones too, have *not* been mathematicians. To instance only in our own time, and without adverting to living characters—having regard only to one branch of physical science, that which concerns the intimate nature and constitution of bodies, and passing by the various other departments of philosophy, such as morals, economics, physiology, geology, and the like, we may mention the names of Priestley, Franklin, Davy, and Wollaston.* It is probable that most of our eminent philosophers may have had some slight general knowledge of the mathematics, such as even our practical men commonly possess, and such as becomes a liberal education. They may have run through Euclid just as they may have run through Homer; nay, they may have done more than this, without being mathematicians any more than they were Grecians. This, in particular, may be said of the last-mentioned philosopher, though I believe so much even cannot be affirmed of the others. Even among our engineers,

* We have Mr. Babbage's authority in regard to Dr. Wollaston.

whose pursuits would seem to make mathematical acquirements more requisite, the most eminent, such as Smeaton, Watt, Rennie, and Telford, have not been distinguished by any beyond the merest common-place. Many of their compeers have advanced much farther in these routine attainments, and yet wanted that tact, that fine superior sense, which is far more indispensable to the man who has to take and deal with things as they are, enveloped in all their circumstances, and subject to all their qualities and contingencies. Sir John Herschell observes, that "almost all the great combinations of modern mechanism, and many of its refinements, are *creations of pure intellect*, grounding its exertions upon a very *moderate number of elementary propositions* in theoretical mechanics and geometry." In what have the pupils of the *Ecole Polytechnique*, who are all mathematicians, excelled our own engineers? Let the fate of the first suspension-bridge at Paris tell. We have yet to avail ourselves of the eminent services which the high mathematical attainments of the pupils of our own school of naval architecture were to render to the science—if science yet it be. What has been the result? Does even the Surveyor of the Navy put forward any scientific pretensions? Has he not been selected out of another profession? Has the professor of the school himself succeeded better, or so well, as the unpretending shipwright who built the Pearl? Let it not, however, be understood, that the school has not sent forth able and useful men, or that they have received rewards equivalent to their merits. But it is maintained that in this, as in many other cases, the tentative method has been, and perhaps ever will be, of more value than science, and that those qualities of the mind for which I have contended, and which science cannot give, are superior to and more indispensable than mathematical attainments; and this may be said without condemning the application of analysis, as far as may be, to the successful results which experiments on a large scale may have produced. In such analysis, indeed, if sagaciously and not too rigidly and scientifically conducted, those superior qualities will appear, just as they do appear, in the rough empirical sort of analysis which the successful though unpretending shipwright calls to his aid. Those among the students who are in possession of these natural gifts, will break through the prejudices and pedantry which a too engrossing attention to mere science creates, and keeping it in its proper place will make it secondary or subservient to a comprehensive view of their peculiar and very complicated subject, satisfied, if they cannot mark and estimate all the concomitant influences, in a manner so precise and determinate as they could wish, that they at least form their conceptions and draw their conclusions in conformity to the *truth* of things.*

(*To be continued.*)

* Let this be exemplified by an able article which appeared within these few months in the "United Service Journal," written, I believe, by a pupil of the school above mentioned.

MITCHELL'S improved mode of setting grates, or rather constructing the lower part of chimnies in which grates are used, may be seen at 216 Fulton st. a few doors above Greenwich st.

The object of the inventor is to do away with the great objection to the use of Coal, the floating dust from it, which settles all round the apartment and upon all things and persons within it. This we think is effectually attained; a draught is created which completely carries off this dust; so that stir the fire as you may, and rake out the ashes however violently, there come forth no floating particles into the room.

Any chimney may be altered at slight expense, in comformity with this plan. We recommend it to the notice of all neat housewives.

FROM JAMAICA.—The schooner Joseph Y. Tomkins, Taylor, arrived at this port yesterday from Port Royal. Capt. T. has politely favored us with a file of the Jamaica Herald, to the 30th September, from which we glean the following items.

On the night of the 7th September, several severe shocks of an earthquake were experienced at Port Royal. The Herald says:—

"There were, indeed, *four* distinct shocks within the space of about two minutes—but the first was truly awful and alarming. Many persons were awakened by it and found themselves rocking in their beds, while the roofs, shingling of the houses, and furniture were rattling—the glass on the sideboards ringing, and lamps swinging to and fro. It was both preceded and followed by a sudden gust of wind, accompanied by rain and a peculiar noise, resembling the rumbling of heavy carriages at a distance. The indulations were from east to west, and the duration of the first shock, from 10 to 15 seconds—the other three shocks followed in quick succession, but were gradually fainter to the last. It is but too probable that this was but a slight effect of a more dreadful and disastrous convulsion that may have occnred at the same moment on the continent; and we shall ook with much anxiety for intelligence from thence."

The paper of the 11th says:

The Earthquake appears from our country letters to have been severely felt from one end of the Island to the other, and to have caused great consternation. We have not heard that it occasioned any serious damage. Houses, however, have been more or less injured in almost every parish.

It is stated in the paper of the 9:h that a serious mutiny occured on board the schr. J. Y. Tomkins, which sailed from Port Royal on the 9th September, during which an attempt was made on the life of the master. The captain of a British vessel of war observing the schooner's flag hoisted *Union down*, sent a boat to her and secured the mutineers. They were subsequently taken before the magistrates of Port Royal, for examination, the result of which was that the full particulars of the case should be submitted to the Attorney-General, the men, in the meantime, remaining, in prison. Col. Harrison, the United States Consul, being anxions to enable the vessel to proceed on her voyage, was desirous of having the offenders delivered over to him, in irons, that he might send them home for trial—but he was informed, that, as they had already been given into the custody of the authorities there, nothing could be decided upon until the Attorney General's opinion was ascertained.

The papers are full of complaints of the conduct of the "apprentices," or negroes, since their emancipation, but make no mention of distarbances of moment. Apprehensions are entertained that owing to their refusing to work more than eight hours a day, the raising of sugar will cease to be profitable to the proprietors. Neither offers of money nor of extra allowances by exchange of time, nor reasonings as to the mischief which must result in the estates, will induce the negroes to work at night.

The accounts from Demarara also represent that Island to be in every distracted state. Martial Law had peen pooclaimed at St. Kitts, and it was supposed the other colonies would require a resort to it. It is stated that the negroes had set all authority at defiance.—[Baltimore American.]

LATER FROM EUROPE.—By the *Britannia*, Captain *Sketchley*, from Liverpool, papers to the 2d ult. are received.

Accounts from *Spain* appear to be in the usual state of uncertainty, neither party making any decisive movement.

In *Portugal* the Cortez had met, and Don Pedro had addressed them in a long speech, for which we have not room today. One of the questions propounded for their consideration is, whether the Regency now exercised by him should be continued?

According to the letters from *Constantinople* war had been renewed between the Porte and the Viceroy of Egypt. Meanwhile Ibrahim—of whose death a false rumor had reached and rejoiced the Sultan—appears to have subdued Syria.

CONSTANTINOPLE, AUGUST 5.—A Tartar, arrived a few days ago from Sivas, brought despatches from Reschid Mehemet Pasha, announcing the death of Ibrahim Pasha. According to the statement, this Commander-in-Chief of the Egyptian army, after being defeated by the insurgents from Naplooz, was obliged to take refuge with a detachment consisting of a few hundred men in a small fortress, which, after a desperate resistance, was taken by storm.—Ibrahim was taken alive by the enemy, and put to death in the most barbarous manner. After cutting off his hands and feet, the arabs tied him over the mouth of a loaded cannon, and by firing it put a termination to his sufferings and existence. This information produced the greatest satisfaction to the Sultan, and excited at Court, as well as at the Porte, a joy which they could not be controlled. Numerous addresses forwarded to Reschid from Syria, and signed by the most influential men in the country were at the same time transmitted to the Porte.

After an enumeration of the vexations to which Ibrahim has subjected them, they implore the assistance of the Sultan's troops, declaring it their determination to rise in mass against their oppressors, as soon as the providential interference they solicit shall arrive.

Another letter derected from Syria confirming the death of Ibrahim was sent three days ago to the Palace. This concurrence of testimony left no doubt in the Sultan's mind that the information was correct, and induced him to issue the most pressing orders for the departure of the regiment appointed to the reinforcement of the army under the command of Redschid Pasha. Yestereay morning a regiment of the Imperial Guard was embarked for Kara Missal. It is to proceed thence to Iconia where the troops marched from Constantinople, and to establish their head-quarters.

The following circular, addressed by Boghoz Bey to the different Consuls at Alexandria, and of which a copy arrived in town yesterday, proves that the insurrection in Syria has been quelled, and that the Sultan, on reckoning on the dreaded Ibrahim's death, has been reckoning without his host:

"Sir—I hasten to forward you the translation of a letter from His Highness Ibrahim Pasha, dated Jesser, the 17th, 1250, (June the 26) the original of which has been sent to Jaffa, and the copy of which has arrived to-day to His Highness, the Viceroy's representative, by a dromedary courier.

"The sheiks and inhabitants of the mountains of Naplouz, Jerusalem, and Yebel Kalil, have presented themselves to solicit pardon. The favor they asked has been granted to them, and their act of submission has been accepted as for the past. Every one of them returned afterwards to his home.

"As there is no reason to doubt that this success has been the result of the superiority of arms of His Highness the Commander-in-Chief, as well as of the kindness and paternal solicitude of His Highness Mehemet Ali, it behoves me to communicate this information to the Consuls of the different European powers in Egypt. "BOGHOZ YOUSSOUF."

"*Alexandria, July* 2."

The latest letters from Syria, arrived in town, are in date of July the 1st. Ibrahim Pasha was then at Jerusalem. The insurrection in Syria was completely quelled. Mehomet Ali was at Jaffa, where his son was now expected.

CONSTANTINOPLE, Aug. 4.—The important facts I have had in my late communications occasion to record were of a nature to lead you to anticipate a fresh rupture between the Sultan and Mehemet Ali; to-day I have to inform you that this event has taken place. With one accord both parties have "cried havoc, and let slip the dogs of war." At the head of all his disposable troops, the Governor of Egypt, under pretence of quelling the insurrection in Syria, and rescuing his son from the critical position to which, as he gave it out, the victorious insurgents had reduced him, has landed in that country and completed his preparations for a new campaign. Upon receiving information of the explosion of events it had for some time been intent in preparing, the Porte greedily seizes this opportunity, which the exaggerated reports transmitted has induced it to consider as highly favourable to the furtherance of its designs, to vindicate its injured rights, and hurries on as many regiments of the guard and of the line as the safety of Constantinople allows her to spare, to reinforce the army Redschid Mehemet Pasha has collected at Sivas. The fleet is to sail in two days hence. A circular, it is said, has been forwarded by the Reis Effendi to the different Embassies at Constantinople, acquainting them with the resolution

the Porte has adopted of taking coercive measures against Mehemet Ali, and with the motives on which this determination is founded. The principal of these are,—the refusal on his part to pay, according to the stipulations agreed upon at Kioutayah, the tribute; to evacuate the districts of Oursa and Rana, which he has taken possession of without the Sultan's consent; and thirdly, the imperious obligation under which the Sultan is placed, as the father of his people, to lend a favorable ear to the incessant entreaties of the population of Syria, which reduced, throngh Ibrahim's tyrannical conduct, to the utmost despair and misery, implores the intervening protection of their legitimate sovereign. A few weeks yet, and hostilities will have commenced.

Still Later from Europe.—The Pacific, from Liverpool, the packet of the 8th, is below. We are indebted to "the mate of the Pacific," and he will be good enough to accept our thanks therefor, for Liverpool, London and Dublin papers of the 6th.—We can to-day give but very short extracts, which is however the less material as there is nothing of much interest.

The accounts from Spain are still of a perfectly undecided character. Don Carlos seems to keep his antagonist busy at the game of hide and seek. The following is the latest news from the Spanish frontier:

Bayonne, Sept. 2.—"We are assured that the two battalions of Guipuzcoa are dissolved, and that the men composing them have returned to their homes in the neighborhood of St. Sebastian.

"Don Carlos passed Araix on the 30th ult."

Our Bayonne letter, dated the 30th ult., mentions that reports were prevalent in that town that the Carlists had been successful in various encounters with the troops of the Queen; but adds, however, that little or no reliance is to be placed in them. Fifty mounted Carlist lancers, and a number of wounded and sick, driven from Elisondo by El Pastor, had taken refuge on the French Territory.

His consort, whom he left behind in England, is dead.

Portsmouth, Sept. 4th, 1834.

Death of Don Carlos's Wife.—At noon to-day this illustrious Princess, the Donna Francisca Teresa of Spain, departed this life, in the 36th year of her age. She died of internal mortification. She will be buried, *pro tem.*, in the churchyard of Alverstoke, for subsequent removal to Valencia.

Conspiracies in the Spanish capital are still spoken of. Atttempts at insurrection had been made in various parts of Spain, but thus far appear to have been immediately suppressed.

A Liverpool paper of the 5th has the following from Portugal:

Falmouth, Aug. 31.—This afternoon his Majesty's brig Royalist, arrived here from Oporto, whence she sailed on Wednesday last. Information had been received there from Lisbon, announcing the election of Don Pedro as Regent, by the Cortes, with scarcely a dissentient voice. The choice of the Emperor had given much satisfaction at Oporto; it was expected that the Queen's marriage would be the next subject for discussion.

From France the only intelligence of any interest is that Marshal Gerard, the President of the Council, is seriously indisposed.

VARIETIES.

Death by the bursting of a Soda Water Bottle.—Judge Jebb, of Rostrevor, Ireland, died suddenly—and, as was at first supposed, of Cholera. Late accounts, however, attribute his death to the explosion of a soda water bottle, which he was shaking preparatory to opening. A fragment of the glass entered his thumb, and some efforts were made to extract it. This brought on a serious nervous excitement, to which the judge was habitually subject, and in the course of a few hours became so violent as to terminate his existence. It is not decidedly stated whether the attack partook more of tetanus or paralysis, or whether both series of symptoms were observable in the short progress of his fatal malady.

The Ex-King of Portugal.—Don Miguel arrrived at Milan on the 20th of August. He took up his abode at the hotel called Albergo Reale. In the evening he went to the theatre at La Scala, where he became an object of great and not very civil curiosity. The Viceroy has exchanged visits with him, but without any formality. The *Milan Gazette* of the 22d, in its list of arrivals and departures, speaks thus about Don Miguel:—"Arrivals—Il Signore D. Miguel da Braganza, from Genoa," &c.

The Queen Regent of Spain, and her Chamberlain, Munoz.—The present position of the Spanish court proves the profound observation of Napoleon, "*Que les femmes font des mauvaises politiques, se laissant toujours gouverner par le cœur.*" Heedless of every consequence, the Regent has not only publicly appeared in the Prado with Munoz by her side, but she has openly insulted the nobility in the person of the Duke St. Ildefonso, who on that occasion actually rode behind them *en chasseur*. The nation have beheld with indignation her treasures lavished in the purchase of houses and equipages for the happy favorite, who, to crown the whole, has been appointed chamberlain to the queen, an office which gives him the *entrée* to her chamber at all hours. A queen-mother without a cortejo would be quite a novelty in the Spanish annals. The mother of Philip IV. had her Valenzuela, the mother of Ferdinand her Godoy. Christina, the mother of Isabella, is not singular, therefore, in this respect.—[Monthly Mag. for Sept.]

Admiral de Rigny, Minister for Foreign Affairs, is said to be on the point of marriage with an American lady possessed of an income of 16,000*l.* a year, but who has two daughters by her former husband, each of whom, on attaining her majority, will take one fourth of this fortune.—[Paris Journal.]

The speculating ladies, excluded from the upper galleries of the Exchange by the President of the Tribunal of Commerce, have appointed a committee to direct their affairs; and an office has been hired opposite the Exchange, in Rue Notre Dame des Victoires, where the ladies will assemble during 'Change hours.—[Paris paper.]

The British revenue cutter Cameleon, lying too in the channel off Dover, was run down in open day light by the British frigate Castor. The cutter foundered immediately, and with all her officers and crew except four, who caught by the bobstays of the frigate, or were picked up by her boats.

The Pope has just promulgated throughout his states regulations concerning public executioners, their assistants, and their wives. They prescribe the cut of their clothes, the hours at which they are allowed to appear in public, and the places and churches they are permitted to frequent. Among other characteristic marks of this fraternity, they are required to carry a black stick, wherewith to point out the objects they are desirous of purchasing.—[French paper.]

The ancient and formidable fortress of Montgatz, in Hungary, was destroyed by fire on the night of the 27th July. The flames burst out about eleven o'clock, at the northern angle, and spread with such rapidity, that in a very few hours every part which was combustible was consumed. All assistance from without was impossible, from the situation of the castle, which was seated on a steep isolated rock. A great number of valuable works of art have perished; but fortunately no lives were lost.

Pinder.—Splendor was the passion of his soul: splendor of achievement, splendor of renown, splendor of station and outward circumstances. His very pride seems to to have suggested to him that nothing but splendor was worthy of his muse. His genius, to use a figure of his own, was the eagle of Jove, that would not be severed from the sceptre and the god. These arictrocratic predilections, this enthusiastic attachment to munificent monarchs and chiefs of ancient fame, were in perfect unison with the whole tenor of his destiny; born, as he was, in the midst of the Pythian festival, living surrounded by shows of solemn pomp, and dying, as he had lived, in the full blaze of public ceremony, in the center of a theatre, and while rapt in those emotions of rejoicing sympathy, wich such scenes were sure to awaken in his bosom.—[From an Article on Literature, by Sir D. K. Sandford, in "Popular Encyclopædia."]

The Manati, or sea-cow, from ten to sixteen feet in length, has a head something like a bull-dog, nostrils semi-lunar, and eyes very small and near the snout; it is without ears in outward appearance, but has two small spiracula situated at the back part of the head; mouth large, with sofa and protracted lips, fitted for laying hold of the grass or herbage growing near the shore; neck short, and body covered with a rough blackish skin, thinly sprinkled with bristly hair; the belly and sides near the tail, white. From the shoulders protrude two pectoral fins (the only fins on the animal) resembling arms, with which it supports itself in the water, and which enables the female to give suck to its young, who receives it from several porous openings or mammæ in the breast of the animal. The tail is formed like that of the whale. It is an amphibious animal, never leaving the water, but feeding upon the aquatic plants and shrubs growing on the borders of the rivers and lakes, sometimes elevating its head to munch at the bushes which overhang them. Its flesh is white and delicate, resembling veal, in appearance and taste, and particularly when dressed, and it will keep good several weeks, even in the hot climate of which it is a native, when other meat will not resist putrefaction for as many days.—[Martin's West Indies.]

The Penguin.—At a recent meeting of the Zoological Society, Mr. G. Bennett read a note on the habits of the *King Penguin, Aptenodytes Patachonica*, Gmel., as observed by him on various occasions when in high southern latitudes. He described particularly a colony of these birds, which covers an extent of thirty or forty acres, at the north end of Macquarrie Island, in the South Pacific Ocean. The number of penguins collected together in this spot is immense, but it would be almost impossible to guess at it with any near approach to truth, as during the whole of the day and night, 30,000 or 40,000 of them are continually landing, and an equal number going to sea. They are arranged, when on shore, in as compact manner, and in as regular ranks as an army of soldiers; and are classed with the greatest order, the young birds being in one situation, the moulting birds in another, the sitting hens in a third, the clean birds in a fourth, &c.; and so strictly do birds in similar condition congregate, that should a bird that is moulting intrude itself among those which are clean, it is immediately ejected from among them. The females hatch the eggs by keeping them close between their thighs; and if approached during the time of incubation, move away, carrying the eggs with them. At this time the male birds go to sea, and bring home food for it; it soon becomes so fat as scarcely to be able to walk, the old birds getting very thin. They sit quite upright in their roosting places, and walk in the erect position until they arrive at the beach, when they throw themselves on their breasts, in order to encounter the very heavy sea met with at their landing place. Although the appearance of the penguins generally indicates the neighborhood, Mr. G. Bennett cited several instances of their occurrence at a considerable distance from any known land.

Compression.—No one who has not attempted the task can fully appreciate the difficulty of compressing within prescribed limits the remarks suggested by a subject affording superabundant materials of interest and excitement. When some one asked Sir Walter Scott why he did not write his life of Napoleon in three volumes, instead of nine, his answer was, "I had not *time*." A reply which will appear by no means paradoxical to any who have had the least literary experience; as it is a truism among all such, that it is much easier to amplify than to condense; to be verbose on the most barren, than concise on the most fertile theme.—[Literary Gazette.]

Days of the Creation.—Supposing that there are inhabitants at the poles of the earth, how must they understand the days of the creation? To them a day of light is six months long, and a night of darkness six months long, and the day made up of night and day covers a year, and it is a day, too, limited by morning and evening. Such persons, therefore, must suppose, upon the literal understanding of the days of the creation, that at least six years were employed upon the work. So also at the polar circles, there is every year one day that is one continued vision of the sun for 24 hours, and one continued night of 24 hours; while everywhere within the polar circles the day and the nights respectively are for six months more than 24 hours, extending even as we advance towards the poles through the time of many of our days and nights. How are the inhabitants of these regions to understand the week of the creation, if limited to the literal interpretation of the inspired record?—[Professor Silliman.]

The following picture of matrimonial felicity of from the "King's Own."

"Mr. and Mrs. Reinscourt were joined, but they were not one. Like many others in this world is error, the marriage might be typified by a vial, of which one half has been filled with oil, and the other with water, having a cork in its mouth, which confined them, and forced them to remain in contact, although they refused to unite."

NEW-YORK AMERICAN.

OCTOBER 4—10, 1834.

LITERARY NOTICES.

THE LITERARY AND THEOLOGICAL REVIEW, Nos. I, II and III; conducted by LEONARD WOODS, JR.; N. York, D. APPLETON & Co.—This well printed and ably conducted "Review" had reached its third number before it was our fortune either to see or hear of it. We shall not, judging from what has appeared, be willing that its future progress should be as unmarked by us as its commencement.

It is a quarterly publication, to which the name of "Review" is affixed, rather, it would seem, in compliance with some notion of the popularity or general acceptation of such a designation, than because it is, or is intended to be, literally a critical Review. It is rather a collection of essays periodically issued on topics of interest—chiefly religious—but not by any means excluding those purely literary.

One established rule connected with this work is, that each article shall be given under the name of the writer. Thus the positive evils—and, we must say, the, in some cases, positive benefits—of anonymous writings are avoided. How it will work remains to be seen.

The Editor writes well—appears to be much conversant with modern languages, and particularly with the rich mines of German theology and literature. His correspondents, lay and clerical, seem to enter zealously upon their portions of the labor and research—greater far than is imagined by those who read currently and rapidly what it requires months adequately to prepare—requisite for the success of such a periodical; and we cannot but believe that the cause of religion and of good letters will derive important aid from it. From No. II, we make an extract from a paper by the Rev. *Mr, Gallaudet*, on the assistance which the language of signs may afford to missionaries among foreign tribes or peoples, while the language of each is unknown. We were much struck with the results stated by this ingenious and indefatigable philanthropist.

It is a curious fact, taken in connexion with what has just been stated, to show the power of *natural sign-language*, that the late Principal of the American Asylum for the deaf and dumb, while engaged in their instruction, was able to convey to an intelligent pupil whom he had taught for some time, and who had become very familiar with the expressions of his countenance, *historical facts*, without spelling *any words on his fingers, or using his arms at all in making gestures*. He would take, at the suggestion of a by-stander, any event in history, which could be portrayed on canvass, so as to make a graphical picture of it,—and which the pupil had read, perhaps some two or three years previous,—but selected at random, and without the most remote allusion to it, so that the pupil could even conjecture what it might be,—and by the mere expressions of his countenance, accompanied with a few motions of the head, and attitudes of the body, so distinctly convey the facts, that the pupil would immediately write them down, in his own language, on his slate. As an illustration of this, the request was made, one day, by an eminent painter of our country, that *the historical fact of the sentencing of his sons to death by the elder Brutus*, might be communicated. This was attempted in the mode that has been mentioned, and with entire success. The pupil had, indeed, read the account, it may be, some two or three years previous, but no allusion whatever was made to it, by any other communication than that of certain expressions of the countenance, motions of the head, and attitudes of the body.

Keeping these things in mind, let us proceed to the examination of our subject. Let us suppose a missionary to be landed on one of the islands af the Pacific Ocean, for the purpose of conveying to the minds of its inhabitants the interesting truths of the Gospel. They are entirely ignorant of the English language, and the missionary is supposed to be as ignorant of theirs. It is in vain for him to begin with putting a grammar or dictionary of his tongue into their hands, and they cannot furnish him with one of theirs. Words either of his or their language must first be learned, before they can advance a single step in their intercourse with each other. Under these circumstances the missionary's first attempt will naturally be, to learn the language of the island. How is he to do this? He points to the most common objects, and inquires their names; thus he may easily learn the names of every thing which immediately addresses itself to some one of the senses.—In all this he learns nothing by the *ear*, excepting indeed the names of the mere sounds of animals, or of nature, or of music: besides these, all his knowledge of this part of the vocabulary of the island is obtained through the medium of the *eye*. True, the name or ordinary sign for these various objects is an oral one; but this is quite a different thing from the import of this sign, which might as well have been expressed by an appropriate gesture, or by the manual alphabet of the deaf and dumb, or by written characters.

But let us advance a step farther. These objects which are addressed to the senses, are not always accessible. The missionary may have forgotten the name of an animal, a tree, or a utensil, and may wish to have it repeated. The object must be found, before its name can be revived. But were the missionary familiar with the language of signs, and a little practice would make the native equally so, without stirring from the shade of the tree under which they were conversing, they can, in imagination, gather round them all the objects of the visible world, and fix their names in the memory. These signs, too, being actual *portraits* of the objects, serve more easily to recall them when the arbitrary sound which denotes them may have escaped from the recollection.

But this is comparatively the least important part of the labor of the missionary. He now wishes to learn the terms which denote the most common actions and affections of the body; for instance, to eat, to drink, to walk, to run, to ride, to sleep. Must he wait till he and the native see some person engaged in these actions; or shall he make a sign descriptive of them? The sign would be easily understood, and the name settled. In this respect he gains no new knowledge by the *ear;* whatever he learns is acquired by the *eye*. He and his companion are as it were DEAF AND DUMB. He next is anxious to learn the words which denote some of the familiar occupations of life, perhaps to boil, to bake, to cut, to kindle a fire, to build a hut. Must he go where these processes are actually in progress?—He needs not, if he is familiar with the language of signs and gestures. He describes a kettle by signs; he places the wood beneath it; he fills it with water; he kindles the fire; he portrays the bubbling of the water; he dips his finger into it, and draws it out suddenly, as if it were scalded. He has before learned the name of water "and what do you call this bubbling water." he inquires; "this water which burns my finger? The reply furnishes him with the name he sought, and a sign is also established for the art of boiling, which may be profitably used in various other instances. And in a similar way he may acquire the meaning of all other terms, descriptive of common transactions. still it is his *eye* which teaches him, and not his *ear*. He is still, as well as his companion, practically DEAF AND DUMB.

The various emotions of the heart, the foundation, let it be remembered, of all moral and religious instruction, perhaps next demand the attention of our missionary. He may utter the words *love* and *hate* ten thousand times, and ask as often the islander what are the corresponding terms in his language, but to no purpose. A mother passes who is caressing her infant with parental tenderness, and two friends soon follow her, who are exhibiting, by their looks and conversation, the emotion of love.—Now he has something upon which to fix the attention of the native, and inquires by what term he denotes this feeling. The *eye*, not the *ear*, is still the medium of intercourse. But he might have portrayed a woman by appropriate signs, and the infant whom she caresses, and the friends who were conversing together, without waiting to have these scenes actually take place; and, in addition to this, exhibit the emotion of love strongly in his own countenance. The islander at once comprehends him; and thus a new word, and a new symbolical sign are settled for future use. By similar processes of description, he may speedily add the names of all the passions and emotions of his vocabulary.

He advances to the operations of the intellect; and what an herculean task is before him! By what process shall he present to the observation of the islander, such operations of the mind, as to *think*, to *remember*, to *forget*, to *understand*, to *contemplate*, to *imagine*. He sees at a distance a man building his hut; the man finds a difficulty in the construction of the door; he stops and assumes the attitude of thought. The moment is a happy one, and the missionary inquires by what term that visible exhibition of the internal working of the mind is denoted, and receives a satisfactory reply. But this illustrative example might not have occurred for hours, or even for days. By the language of signs, however, he can portray this very example, and a hundred others equally pertinent; and thus, on the spot, acquire the new word which he seeks.

He rises from the ground: he describes by signs the setting of the sun, and the appearing of the stars, covering the whole concave of the sky; he puts himself in the attitude of contemplation: his eyes leisurly survey the immense assemblage of the heavenly hosts, his countenance exhibits the actings of his soul. The islander who has already caught with enthusiastic ardour this new and fascinating language, immediately utters, in his own tongue, the word which denotes "to contemplate." Still the *eye* claims the honor of being the teacher; the *ear* serves only the humble purpose of furnishing an arbitrary name, by which the imagination may again form, and the memory revives the associated thought.

Our fellow students need a few adjectives to add to their nomenclature; such as high and low, hard and soft, long and short, round and square, bold and cowardly, alive and dead. They are quickly learned: for the various objects to which these epithets belong can easily be presented to the imagination by signs, and also the qualities which are denoted by the above-mentioned terms. And all this is done while our missionary and his friend are calmly reposing beneath their bread-fruit tree.

And now pronouns must be learned, and the cases of nouns, and the comparison of adjectives, and the moods and tenses of verbs. "I give you a fish," says the missionary: "what is that in your language?" He speaks an unknown tongue; but he makes the sign for a fish: he points to himself as possessing it; he hands it to his companion, and signifies that he will not take it back, that it is to belong to his companion. He is immediately furnished with the appropriate phrase. He multiplies examples, and he soon has a little stock of phrases, by comparing of which together he begins to elicit the structure and idioms of the language.—Were he not to pursue this course, he must wait day after day till the suitable occasions occur, illustrative of the phrases, the import of which he seeks. "How many tenses have your verbs?" The question is useless. He must allude to some known past, and some anticipated future event, in order to obtain knowledge on this point; and what carefulness is necessary, if he depends on the common occurrences of life, as they transpire during his intercourse with the natives, in order to acquire an accurate knowledge of this very difficult part of all languages? But if he has well settled, by appropriate signs, the diurnal motion of the great luminary of heaven, the succession of days and nights, of weeks and months, nay of hours and minutes, all of which is quite practicable; and if he is expert in describing motions and actions, he can easily portray a variety of events in such an order and connexion, as to mark all the varieties of time, and thus ascertain how this order and succession are denoted in all the various tenses of language which it is his aim to acquire.

LETTERS TO THE YOUNG, by MARY JANE JEWSBURY, 1 vol.; N. York, D. APPLETON & Co.—These letters have not, that we are aware, been presented before in an American edition, though they have gone through several editions in England.

They are, we are assured by the writer in her prefatory remarks, a real and not a fictitious correspondence—though names are of course suppressed. They are the letters of a pure, humble and enlightened Christian, who has studied the human heart, its temptations and its weaknesses, and has found one only safe reliance for strength—and who earnestly strives to impart to her young friend a sense of the necessity and value of early acquiring the same reliance.

We extract letter XVII. on the dangers of emulation and ambition, as worthy to be deeply considered.

My Dear ——: From what I have observed and heard of you, and from what I recollect of myself at your age, I think I understand your present state of feeling, your tastes, desires, opinions, and senti-

ments. From having drawn them out into action, and from having enjoyed and suffered their consequences, I know too whence they come, and whither they tend. To this you will attribute my affectionate anxiety on your account.

My love, you are ambitious;—vague, restless, ever-changing desires occupy your mind, and your heart is full of those fair shadows with which romance disguises reality. What kind of distinction is best worth having you have not yet decided; but, as least unattainable in the present state of society, perhaps your thoughts fix most frequently on intellectual celebrity. I say celebrity, for I do not believe that intellectual acquirements would fulfil your vision. Your judgment is convinced of the necessity of spiritual religion; occasionally you are touched with a sense of its worth and sweetness, but you do not believe that it is in itself all-sufficient to make you happy, and your heart rebels frequently against its requirements. You are well aware that you cannot compromise with God; "that you are not your own; that, as "bought with a price," you are bound to surrender all you are, and all you possess, to his service; to account your talents a delegated trust, for the use of which you are responsible, and the glory of which appertains to him! Now this loving God, with "all the understanding," is a stumbling block at which thousands have stumbled, and tens of thousands have fallen to rise no more. To toil, deserve, and acquire, without the stimulus supplied by personal ambition, or an exulting consciousness of superiority; to receive praise and render it to God untouched: to strive for victory and inscribe the trophy with the name of another—this you feel is a "hard saying." Yet, herein lies true happiness and true distinction. Personal aggrandizement is the stately phantom, of which desire to glorify God was once the warm and living substance. It expired in Paradise with Adam's innocence, but divine grace can revive it even here; and it starts into full life and beauty, in that region where each glorified spirit casts his crown at the foot of Him who gave it.—Was not David, making magnificent preparations for the temple which another was to build, and renouncing even the glory of those preparations, nobler and more distinguished than the same David numbering his people from vain-glorious pride? My love, you are dazzled with the dew-drops of earth, because you do not raise your eyes to the sun in heaven. The queen of Sheba thought no more of the glory of her own court, when she had seen the surpassing excellence of Solomon's; and Paul, after he knew him who alone "hath life and immortality," could cheerfully "account all things but loss" for the excellency of that knowledge. Love, the constraining love of Christ, can alone render this self-renunciation easy and delightful—but it can do so; can enable a soul really to like, and rest contented with, life's most secluded path, and most unobtrusive occupations. But do not misunderstand me, and suppose that this renders the cultivation of our talents unlawful, or unnecessary. Never let indolence, as an excuse for supineness, say to vanity, as Balak did to Balaam, "Thy God hath kept thee back from honor." Had you the mind of an angel, religion would not circumscribe its exercise—it would allow you to know, and desire to know; to learn, and determine to learn—all that art, imagination, and science have placed within human reach. One thing religion certainly does—it claims a right to prescribe the motive by which we shall be actuated, and the object at which we shall aim; but surely, the glory of "Him who filleth all things," is no mean motive, and the everlasting welfare of our fellow-creatures, no unworthy object. Besides, with this apparent subjection, it entwines our happiness; and in exchange for the wild liberty of living to ourselves, it offers a joy which the world cannot give, a peace which it cannot take away.

But I have overlooked one material point in the argument. Distinction is not, as David says, of ourselves: "It cometh neither from the east, nor from the west, nor from the south, but God is the judge: He putteth down one and setteth up another." Anxiety, therefore, on this point, is vain even on the ground of probabilities, which, in regard to woman, are as one to ten thousand against her attaining it. Again, if an early desire of distinction has often been the pledge and concomitant of genius, it has yet oftener been associated with presumptuous mediocrity. I am, however, tired of argument; so, I doubt not, are you; let us therefore forget this present world, and realize that coming day when God shall manifest that all which has been "highly esteemed among men," has, in his sight, been "abomination." Would you then be some sparkling wit, or admired poet, or erudite scholar, who, having wholly sought his own glory, and wholly received his reward in this life, has nothing further to expect; or the Christian, who, with one talent or with five, has "occupied for his Lord?" What you would wish to be then, resolve to be now. Fame's trumpet will be silent in that day, and the approbation of God seen to be what it is even now—all that confers distinction. Read the first four chapters of the first of Corinthians as often as you are tempted to covet the pride of life, or "the honor that cometh from men." I do not expect that your heart will agree with my present statements; but I hope for the future; I hope for a blessing on the privileges which you are now enjoying; I hope, too, that you are not indisposed to ask, "What is truth?" at a higher tribunal than that of human reason, and with a more teachable spirit than that of him who first asked the question. One thing you can do; you can, by a painful effort, but one well worthy of being made, resolve to read neither poetry nor fiction till your mind is steadied. Dr. Johnson says, "It is easier to be abstemious than to be temperate;" I think you will find it easier to abstain altogether, than to taste moderately. If, however, you cannot make this resolution, at least read neither poetry nor fiction that will kindle and increase the fancies and desires of which your heart is already too full; at least let it be the fiction fullest of truth, and the poetry fullest of thought. I now bid you farewell, assuring you of my affectionate interest in your welfare.

Tales of the Garden of Kosciusko, by Saml. L Knapp; N. York, West & Trow.—This fanciful title—derived from the circumstance that it was on the little spot amid the rocks of Westpoint which bears this name, that the idea of relaxing his mind from severer labor by a series of light tales, first struck the author—ushers forth several stories unconnected with each other, but each possessing a due share of interest. *The Exile* is particularly well told.

The New England Magazine, for October. Boston: J. T. Buckingham.

The Knickerbocker, for October. New York: J. Disturnell.

The Pocket Annual; New York: J. Disturnell.

The first named of these periodicals is, as usual, varied, original, and spirited. We copy a paper on *Mount Auburn*, because, we do hope New York will one day have such a cemetery, and because there are spots on our island, not much farther from the City Hall than Mount Auburn is from Boston, where nature offers every attraction of hill and dale, and woods, rocks, and water, for such a final resting-place. [For the extract referred to, see page 638.]

The Knickerbocker is good this month; but we have no room for extracts.

The Pocket Annual, is at once an almanac, pocket and memorandum book, with a list of public officers; and finally, some good literary extracts and various engravings. It is convenient, portable and pretty.

The Westminster Review for April, being No. II of the republication of the Foreign Reviews; N. York, Theodore Foster.—We noticed the first number of this republication when it appeared. The numbers of each Review—and the enterprise embraces four, the London, Foreign, Edinburg and the Westminster—will commence with a new volume. The type, paper, and general execution of this republication are very good.

Bernardo del Carpio, a Historical Novel of the Eighth Century: from the Spanish of *Don Jorge Montgomery*. New York: Harper & Brothers.—This tale is rather curious as an *antique*, than interesting, either by its incidents, or any particular fidelity in its narrative. It goes back to the period of the Paladins and the field of Roncenselles—but it fails to present them vividly to our modern eyes.

Gathering Potatoes.—Recollect that potatoes should not be exposed to the sun when digging them, any longer than can be possibly avoided.

SUMMARY.

The President of the United States returned to Washington, on Tuesday week, in health.

A letter from Dr. Isaac Hulse, of the U. S. Navy Hospital at Pensacola, states that up to the 8th inst. forty cases of *yellow fever* had occurred on board the U. S. schr. Grampus. Four of the crew had died, three of whom with black vomit. He attributes the origin of the disease to the decayed condition of the ceiling of the Grampus.

Early Ice.—The Germantown Telegraph of Wednesday says: "On Tuesday morning, ice was formed in that vicinity, to the thickness of nearly the eighth of an inch."

Destructive Gale.—A heavy rain commenced on the Mississippi, in the region of Natchez, on Tuesday, the 2d ult., and continued till the Sunday following. On the intervening Friday and Sunday a violent gale was experienced, which "prostrated every thing," and caused an immense destruction of crops for a great distance along the Mississippi.

Accident.—At the launch of the Echo yesterday morning, a small boat, containing two men and one woman, being near her stern, was drawn into a position where it was capsized in the whirl occasioned by recoil of the surges in the wake of the vessel—by which means one of the men was unfortunately drowned.

Troy, Monday.—*Stage Accident.*—We learn that one of Walbridge's line of stages for the north, yesterday morning upset near the Washington Hall, in this city, in consequence of a wheel running off.—Nine passengers were in the stage, two of whom were severely injured. Mr. J. M. M'Alister, of Albany, had his arm badly fractured, and another gentleman is now at Washington Hall, considerably injured. Six out of the nine passengers were unable to proceed on their journey.

[*From the Journal of Commerce.*]

Wall Street Church.—We understand that the Trustees of the Wall Street Church have, with the best legal advice, determined that the conditions of the gift of the land upon which the church stands, are such that it cannot be sold and the proceeds invested in other property for the use of the church.—It has been determined therefore to rebuild the present edifice without delay. Besides the difficulty above mentioned, the tombs are private property.

This difficulty did not stand in the way of building large stores, for the sake of the profit to be derived from them, on part of the church yard; to make room for which the sacred ashes of the dead were tossed about with horrid indifference. The organ of veneration—for the dead at least—though strongly developed in the *savage* American, belongs not we fear to his *civilized* destroyers.

Anniversary Celebration.—On Thursday evening three of our diocesan societies held their annual meeting in St. John's Chapel. The celebration was preceded by appropriate religious services conducted by the Bishop, who presided on the occasion. The congregation was numerous, and a great proportion of the clergy was present. The report of the Tract Society was first read, by the Rev. Aldert Smedes, jun., of Christ Church. Resolutions expressive of the satisfaction with which it had been heard, and of the importance of the cause, were then offered by Rev. T. S. Brittan. Next followed the report of Aux. N. Y. Bible and Common Prayer book Society, which was read by William Betts, Esq. Similar resolutions were then submitted by the Rev. J. F. Schroeder, who, by a reference to the early history of the Church of England, illustrated the important agency of Episcopalians in the dissemination and exposition of the Scripture. The Report of the Education and Missionary Society was then read by the Rev. Hugh Smith, Rector of the Mission Church of the Holy Evangelists. It was longer than the other reports, but was a clear and well written document, and presented several views of much interest and importance. This was followed by an animated effusion from the Rev. Lot Jones, of the Mission Church of the Epiphany, on the pains and pleasures of the Missionary life. The ceremonies of the evening were then closed with appropriate devotional exercises.—[Churchman.]

Fort Adams.—More than five hundred men are employed on the great Fort, at the entrance of Newport Harbor. The weekly disbursements are about twelve thousand dollars.

Fair of the American Institute at Niblo's.—The general result of our examination of the various articles presented at this exhibition is, that although it seems to us less varied, and, as a whole, less attractive, than preceding ones, there is manifest improvement in the quality and workmanship of the articles exhibited; and that we take to be the best evidence of the value of such annual shows. It would be quite impossible for us to enumerate, after a single visit,—(we have not been able to find time for a second,) all, or even any considerable portion, of the goods, wares, and varieties exhibited. In noticing, therefore, as we shall now proceed to do, some specimens, it must not be taken as a slight of others.

The first objects that arrested our attention, were three carriages of different construction, in the covered walk.

183, is a double-seated phaeton, leather top extending over the whole, with a coachman's seat, removable at pleasure, and the front seat of the phaeton so arranged, as to be turned round, and become faced to the horses. The makers are *J. Cooke & Son*, and in this sample they have turned out a very finished piece of work.

No. 54—a four-wheeled Stanhope, with two seats and small rumble behind, which, when not needed, is shoved in, so as not to be seen at all. Makers, *Isaac Mix & Son*. This is also an extremely well finished carriage, and withal, light and tasty.

No. 405—a one-horse Stanhope wagon, with turnover seat—same makers.

Entering the saloon, the eye hardly knows where to rest. Looking, however, to the left, we found *McDonald Clark*, or a bust that is his fac simile, watching all who entered. We went up to it at once, and have rarely seen a better likeness, better executed. The materiel is a composition, whic takes all the polish, and seems to have almost the solidity of marble. Beside the poet, is the head of a dead infant, where the calm repose of death is admirably typified. The sculptor of both is *James V. Stout*, of 566 Broome street. These busts stand on two *Scagliola* columns, imitating marble admirably, and at a price greatly below that of marble. These imitations, in all varieties, are executed by *Clark & Dogherty*, 40 Hamersley street.

Passing thence along the north side of the saloon there is a great variety of shell-work, ingeniously and laboriously put together. In a frame by itself, there is a ladies' cape and hat in feathers, made by *Mrs. Little*, 440 Washington street. At the extremity of this walk, are some sculptured marbles, executed with a good deal of delicacy and skill—a part by *Wm. Eagleson*, 150 Broadway, and others by *R. J. Brown*, of Greenwich street. A centre table of dark and variegated Egyptian marble, with pedestal of the same, the whole of great beauty and finish, which we afterwards saw in another part of the saloon, is also of the manufacture of *R. I. Brown*. A case of Shears, part of them of what was described to us as German silver—the cutting part of the best steel—seemed to attract much notice. Near them, Flutes finished with great nicety, and with stops more, one would think, than ten fingers could govern; and Guitars, from *J. H. Atwill's*, Broadway, that Spaniards even might covet, tempted musical amateurs; while other persons more on household goods intent, were examining and admiring some Spermaceti Candles of the manufacture of *Samuel Judd*—hard, polished and diaphanous as finest alabaster. Close by were some loaves of refined Sugar from *R. S. & A. Stuart*, Greenwich street, white and close grained as Parian marble. Turning from which, the Perfumes, Soaps and toilet accessories in every variety, of *Johnson & Co.* of 35 Cedar street, agreeably arrest the senses both of sight and smell. Hard by is a fine display of Broadcloths, soft and glossy to the touch—of the color, seeing them by gas light, we could not judge. Among them were the "Denny cloths," from Oxford, Mass.; cloths manufactured from American wool at Marlborough, Ulster co., by Jno. Buckley. Farther on, some pieces of Nankeen, made by the *Lonsdale Co.*, Rhode Island, from nankeen cotton grown in Georgia. might well pass for Chinese goods; next some American calicoes of the fashionable patterns of the day, manufactured by *A. Robinson*, Fall River, Mass., and sold by Brown, Brothers & Co. here, would, as it seemed to us, bear comparison, both as to texture and colors, with the best imported fabrics. India Rubber too, put to strange uses, may here be seen: garments light and well finished, and withal impervious to the rain, from the *Roxbury factory*, Mass.; life preservers of the same material, and cushions, to be inflated as required. These are all for sale here at *Winslow's*, 66 Maiden lane.

At the extremity of the Saloon there were Carpet rugs of substantial fabric and bright colors from *Lowell*, Mass., also good Oil Cloths from Lansingburg, in this State. Many articles of cabinet furniture were here exhibited. A centre table inlaid with different woods, by *Wm. Pitcher*, cabinet maker, 38 Elm street, very handsome; a secretary, of the finest grained and most highly polished mahogany, with every convenience, by *B. Bosch*, cabinet maker, 196 Broadway; a counting house desk and table, perfect in its arrangement—also two highly finished music stools, by *Samuel Carter*, cabinet maker, 51 Beekman street; sofa beds, by *Brickles*, that might pass for handsome sofas in the best furnished apartments; the same by *Woolley*, 578 Broadway, and so constructed as that the sacking bottom can always be drawn tight. Mr. Woolley has also some very ingenious cots for sick persons, whereby the position may be varied without effort on their part. Among many imitations of marble on wood, we were struck with those by *Geo. Bird*, grainer, 148 Sullivan street. A case of composition ornaments, such as capitals of columns, friezes, &c. by *John Tallier*, manufacturer, 185 Spring street, introduced us to a new and valuable invention.

Returning towards the entrance and hastily glancing at some handsome silver from *Marquand's*, Broadway, and from *Thomson's*, 129 William street, among the latter two particularly pretty fruit baskets, at the famous display of the various articles of stationary from *D. Felt's*, and at two Indians carved to the life, though in a little, out of a solid block of mahogany, by *J. Dodge & Son*, 75 Columbia st., and intended as a front stauchion of fire engine No. 4—a rapid turn in the gallery brought under our notice several highly finished pianos—some capital specimens of writing, by *Isaac F. Bragg*—the beautiful head of a beautiful child, painted in oil, by *H. I. Hubard*, now of Baltimore, and known formerly when Master Hubard, for his skill in cutting paper likenesses—a spirited sea piece, in water colors, by *J. W. Hill*, and the portrait, in oil color, of a boy—well done—by *Marchant*—and here, for today, we must stop our fairing.

The Fair.—We hope to be able to continue our notice of this interesting exhibition; meantime we are informed, and so state, that instead of fewer articles than heretofore being in exhibition, there were last evening fifty-three more contributors than on any previous occasion, and the number was still increasing. The greater extent of the saloon and galleries has the effect of apparently diminishing the extent of the shew.

The Commencement of Columbia College took place yesterday.

The Procession moved from the College at half past 9 A. M. passing through Park Place, Broadway, Walker and Varick streets, to St. John's Chapel, in the following order:—

Janitor of the College.
Students of Arts.
Candidates for the Degree of Bachelor of Arts.
Former Graduates. { Bachelor of Arts. / Candidates for the Degree of Master of Arts. / Masters of Arts.
Honorary Members of the Philolexian and Peithologian Societies.
Teachers of the Grammar School of Columbia College.
Principals of Public Schools and Academies.
Faculty of Arts of Columbia College.
The President.
Trustees of the College.
Alumni of King's College.
Governor and Lieutenant Governor of the State.
Members of the Legislature from the City and County of New York.
Mayor of the City.
Regents of the University.
Foreign Ministers.
Judges of the United States, State, and City Courts.
Members of Congress.
Strangers of distinction.
Foreign Consuls.
Commanding Officers of the Army and Navy of the United States.
Civil Officers of the United States.
Corporation of the City.
Clergy and Professors of Theological Seminaries.
Officers of the State Medical Society and of the Medical Society of the City and County of New York.
President and Professors of the College of Physicians and Surgeons.
Officers of the University of the City of New-York.
City and County Officers.
Trustees of the Public Schools.
Trustees of the High School Society.
Officers and Members of Literary Societies.
Officers and Members of the Academy of Fine Arts.
Officers and Members of the National Academy of Design.

When the procession arrived at the Church, the exercises of the day were opened with prayer by the President, after which the Candidates for the Degree of Bachelor of Arts delivered their Orations in the following

Order.

1. Latin Salutatory Address, with an oration, "Neque majus aliud neque præstabilius humani generis natura invenias."—Isaac C. Delaplaine.

Music.

2. English Salutatory Address, with an Oration on "The comparative effects of Genius and Industry."—William H. Hyde.

Music.

3. An Oration on "The Moorish Character."—Samuel E. Johnson.

4. An Oration on "The Dignity of Human Nature."—Henry Heyward.*

5. An Oration on "The difficulty of forming a Correct Estimate of Character."—Edward K. Bryce.*

6. An Oration on "The Genius and Influence of Women."—William M. Allen.

Music.

7. An Oration on "The Causes of the Progress of Society in Modern Europe."—John Conger.

8. An Oration on "the influence of imagination upon Intellect, considered particularly with reference to Fictitious Writings."—Richard E. Mount, Jr.*

9. An oration on "The excellence of Common Sense, considered particularly in its application to Philosophy."—William Demarest.

Music.

10. An Oration on "Education"—William Dennis.*

11. An Oration on "Memory."—Alexander Major.*

12 An Oration on "The Power of Superstition."—Robert S. Swords.

13. An Oration on "The Characteristics of the Mathematician."—William M. Gillespie.*

14. An oration on "The Importance of Political Economy as a Branch of Education."—John S. Heard.

Music.

15. An Oration on "The Institutions of Chivalry."—William B. Casey.

16. An Oration on "The Republican Form of Government."—James M. Cockroft.

18. An Oration on "The Pleasures and Advantages of a Cultivated Taste."—James M. Beekman.

18. An Oration on "The Pursuit of Happiness."—Philip Rhinelander.*

Music.

19. An Oration on "The Insufficiency of the Light of Natural Reason."—Lloyd Windsor.

20. An Oration on "English Poetry."—William G. King.*

21. An Oration on "The benefits derived from Intellectual Pursuits."—William Cockcroft.*

22. An Oration on "The Troubadours."—William Dodge.

23. An Oration on "The Evidences afforded to the Truth of Christianity by its contrast with the Systems of Ancient Philosophy."—Benjamin S. Huntington.*

Music.

The Honorary Testimonials were then announced and presented by the President, after the following explanatory remarks:

By a statute of this College, it is ordained, that at the concluding examination, there shall be awarded in each Class, a Gold Medal to the student of the best general standing; and also to the student of the best standing in each particular department of study, a Silver Medal; and to the second best student, a Medal of Bronze; which honors are directed to be awarded and conferred at the Annual Commencements. We now proceed to the performance of that grateful duty. Those students, therefore, to whom Medals were adjudged at the late concluding examination of the several classes, will present themselves upon the stage, in the order in which their names are called.

I. Senior Class.

The Gold Medal for the Student of the best general standing in the class, to Isaac C. Delaplaine.

I. In the Department of Constitutional Jurisprudence—

1. The Silver Medal, to Edward K. Bryan;
2. The Bronze Medal, to William M. Gillespie.

II. In Moral and Political Philosophy—

* Students having an asterisk affixed to their names, are absent by permission, or excused from delivering their Orations.

1. The Silver Medal, to Isaac C. Delaplaine;
2. The Bronze Medal, to John S. Heard.

III. In Greek and Roman Literature—
1. The Silver Medal, to Isaac C. Delaplaine;
2. The Bronze Medal, to William Demarest.

IV. In Natural, Experimental, and Mechanical Philosophy—
1. The Silver Medal, to Wm. M. Gillespie;
2. The Bronze Medal, to Isaac C. Delaplaine.

V. In Mathematics and Astronomy—
1. The Silver Medal, to Isaac C. Delaplaine,
2. The Bronze Medal, to William Dennis.

3. Junior Class.

The Gold Medal for the Student of the best general standing in his Class, to Orlando Harriman, jr.

I. In the department of the Rhetoriek and the Belles Lettres—
1. The Silver Medal, to Orlando Harriman, jr;
2. The Bronze Medal, to Evert A. Dutckinck.

II. In Greek and Roman Literature—
1. The Silver Medal, to Orlando Harriman, Jr;
2. The Bronze Medal, to Christian Zabriskie, Jr.

III. In Chemistry applied to the Arts—
1. The Silver Medal, to Orlando Harriman, Jr;
2. The Bronze Medal, to Ludlow Thomas.

IV. In Mineralogy and Geology—
1. The Silver Medal, to Jedediah B. Auld;
2. The Bronze Medal, to John H. Riker.

V. In Mathematics and Astronomy—
1. The Silver Medal, to Jedediah B. Auld;
2. The Bronze Medal to Orlando Harriman, Jr.

2. Sophomore Class.

The Gold Medal, for the Student of the best general excellence in his class, to Giles M. Hillyer.

I. In the Department of History—
1. The Silver Medal, to Henry McVickar;
2. The Bronze Medal, to Giles M. Hillyer.

II. In Greek and Roman Literature—
1. The Silver Medal, to Geo. Harrison Lynch;
2. The Bronze Medal, to Giles M. Hillyer.

III. In Elementary Chemistry—
1. The Silver Medal, to Giles M. Hillyer;
2. The Bronze Medal, to James Renwick, Jr.

IV. In Geometry and Spherical Trigonometry.
1. The Silver Medal, to Harvey A. Weed.
2. The Bronze Medal, in Geometry, to G. W. Hillyer. In Physics, to H. McVickar.

4. Freshman Class.

The Gold Medal for the Student of the best general standing in the class, to Samuel Blatchford.

I. In the department of Rhetoric, &c.
1. The Silver Medal, to Samuel Blatchford.
2. The Bronze Medal, to John McMullen.

II. In Greek and Latin Classics.
1. The Silver Medal, to Samuel Blatchford.
2. The Bronze Medal, to John McVickar.

III. In Roman Antiquities.
1. The Silver Medal, to Thomas G. Talcott.
2. The Bronze Medal, to Samuel Blatchford.

IV. In Ancient Geography.
1. The Silver Medal, to Thomas G. Talcott.
2. The Bronze Medal, to George S. Van Cleef.

V. In Geometry and Algebra.
1. The Silver Medal, to Samuel Blatchford.
2. The Bronze Medal, to Charles E. Shea.

When this most interesting ceremonial was concluded, the young gentlemen who had won the honors remaining on the stage, were thus feelingly addressed by the President:

Young Gentlemen: Besides publicly announcing your names and delivering the testimonials awarded to you as directed on this occasion, it is due to you to present you personally to the Government of the College in the face of this assemblage of your parents, friends, and fellow-citizens, as those sons who, during the last Collegiate year, have deserved best of their *Alma Mater*, and whom consequently she delights to honor. To have earned this distinction when the claims of others were so nearly equal to your own, must be a source of lasting gratification to yourselves, as well as of just exultation to those with whom you are most nearly and dearly connected; whilst the rewards bestowed on you may incite your fellow students to greater diligence, and awaken within the breast of all who remain within our walls an ardent spirit of persevering exertion and generous emulation. To those of you who continue with us, I cannot but express a confidence that you will pursue to the end the course thus auspiciously begun; and that the evidence now given of the approbation of your instructors, will bind you to consistency, from regard both to your own characters, and their estimation of them.

To those of you who have finished your academical career, and are about to enter upon new and untried paths, to you who are now to leave the peaceful retreats of Science for the allurements, cares and duties of Society, who are to exchange the discipline of the College for that of the world—to you my young friends, from whom we are this day to part, I hope and trust that your success in youth may prove an earnest of your prosperity in manhood, and that the honors you have obtained as scholars will be pledges of your future renown as wise and good, as intelligent and useful, citizens.—Thus may your example operate beneficially upon the companions you leave behind you and its influence be extended to your remotest successors.—Cherish this reflection in your hearts, for it will not only impart consolation amidst the disappointments and afford you satisfaction amidst the enjoyments of this life, but it will survive your present existence and increase your happiness in that which is to come."

Music.

The Degree of *Bachelor of Arts* was then conferred on the following named Students of the Senior Class, viz:

William M. Allen, James W. Beekman, Edward K. Bryar, William B. Casey, James M. Cockcroft, William Cockcroft, John Conger, Isaac C. Delaplaine, William Demarest, William Dodge, John S. Heard, Henry Heyward, William H. Hyde, Samuel E. Johnson, William G. King, Alexander Major, Richard E. Mount, Jr., Philip Rhinelander, Robert S. Swords, Anthony Ten Broeck, Lloyd Windsor.—Also on William Dennis, William M. Gillespie, and Benjamin S. Huntington, absent by permission.

The Degree of *Master of Arts* on the following gentlemen, Alumni of the College, viz.:—

John W. Mulligan, Michael Floy, Jr. Hamilton Morton, M. D. Samuel S. St. John, Robert Emory, Timothy R. Green, William W. Van Wagenen, P. Stuyvesant Fish, John B. Purroy, Robert Watts, Jr. M. D. Abraham B. Conger.

Honorary Degrees were conferred as follows:—

That of L. L. D. on Don Thomas Gener, late President of the Spanish Cortez; that of D. D. on the Rev. Thomas W. Cott, of Cambridge, Massachusetts, and the Rev. William A. Muhlenburg, principal of he Flushing Institute.

The Honorary Degree of A. M. was conferred on William Sherwood, Principal of a Classical School in the city of New-York; and on Robert J. Harvey, an Assistant Teacher in the Grammar School of the College; also, on Rev. O. Clark, of Lockport, N.Y.

Music.

24. Valedictory Address, with an Oration on "Moral Sensibility."—Anthony Ten Broeck.

The Exercises of the day concluded with prayer by the President.

Altogether the celebration was one of great interest;—the beauty of the weather, the numerous audience, the presence of many citizens distinguished by station, by learning, and by public services—and especially the general good taste, good sense, and good style of the orations, were calculated to gratify all who look to this College as one of those few institutions of our country pre-eminently fitted to raise up a race of thoroughly educated young men. Among the honorary degrees conferred was one, it will be perceived, of *L. L. D.* on Don Thomas Gener. This affords us the opportunity of stating, what however is probably already known to many of our city readers—that this distinguished foreigner, who, since the restoration of the beloved Ferdinand, has been a proscribed exile in this country, is now about to return to his own. A native of Old Spain, he went at an early age to Cuba, where he subsequently resided, and whence, together with *M. Suarez*, now engaged in commerce in this city, and the Rev. Mr. *Varela*, the truly spiritual and exemplary pastor of the Catholic Church in Ann street, he was sent as a deputy to the Cortes of Spain, when in 1823 Spain made an effort to be free. His manly eloquence, his enlightened mind, his energetic character, soon marked him as a leader, and raised him, for a portion of the time when the Cortes were held at Seville, to the presidency of that body. It was there they pronounced the downfall of Ferdinand—in which judgment Don Thomas Gener concurred—and for which he was condemned to death with confiscation of his property. Under these circumstances America held out to him her protecting arms. He came among us an exile—he has lived among us as a valued friend; and now, when the political condition of his native land allows him to return to Cuba, with rights reinstated, and an unsullied name—he leaves behind him the memory of many benefits conferred, friends who will not forget him, and an unsurpassed reputation for probity, high honor, and high intellectual attainments.

We rejoice that Columbia College should have added his name to the—not long, but most honorable catalogue of those who have heretofore received her honorary degrees; and are gratified too, by publishing the annexed correspondence, to show, that private friends were not less sensible than this public institution, to the merits of such a man:

New York, 1st October, 1834.

Sir—Apprised of your intended return after so many years absence to your own country, we are desirous in connection with other of your friends, in whose name as well as in our own we speak, to have the pleasure of your company at a parting dinner on any day that may be convenient to you.

In the long period, since as a proscribed Exile in the cause of Liberty, you first sought these shores, during all which you have been a resident of this city, we have had too many opportunities of observing and appreciating the high qualities, social, moral and intellectual, which had secured to you the confidence of the liberal portion of your own countrymen, not to feel, now you are about to return among them, that what is our loss is their gain. While, therefore, we may not regret, what both to them and to you cannot be other than a matter of congratulation, we yet desire the opportunity of marking, by something more than a mere private manifestation, the esteem and respect with which you have inspired the strangers among whom you have worn out years of banishment. Hence the invitation we have the honor to communicate.

We are, Sir, with great respect, your ob't humble servants,

James G. King,	G. C. Verplanck,
Geo. Griswold,	Jno. Duer,
Arch. Gracie,	Wm. H. Aspinwall,
Jon. Goodhue,	Ch. Aug. Davis,
Chas. King,	John A. Stevens,
James Kent,	Augustus Fleming,
L. Peugnet,	H. Peugnet,
Mariano Velasquez de la Cadena,	
F. Lacoste.	

To Don Thomas Gener,
Ex-Deputy from Cuba to the Spanish Cortez, and Ex-President thereof.

New-York, 2d October, 1834.

Gentlemen—I have received with inexpressible gratitude, the friendly invitation to a parting dinner, with which you have favored me. I am sorry to say the time which is left me is so short, and the calls upon that little so numerous, as to place it out of my power to accept of your kindness, although my heart is sensibly touched at saying so. Besides, I have been so very happy in this city, and have received so many testimonials of your esteem, that I have not been able to suppress the emotions of my tenderness every time I have met with either of you during these last days. What, then, would be the effect of seeing you all gathered together with no other object but to do me honor?

I am likewise indebted to you for the favorable opinion you express of my moral qualities, which would be the delight of my after days, if I could be persuaded it originated in any merit on my part and not in mere generosity on yours. But, perhaps, the debt of most importance I have contracted in this country consists in the excellent lessons and good examples I have received in it. What recourse have I for the extinction of so many debts? None other occurs to me but to avail myself of all opportunities honorably to serve such creditors, and to pray to God continually for their prosperity, and for the preservation of all those social guarantees on which repose public order, and the liberty and prosperity of individuals; that is to say, for the preservation of your admirable institutions in that perfection which appals the despot, and is the polar star of all friends of the people.

With these sentiments and desires which proceed from the inmost recesses of my heart, I bid farewell to you, and the other friends whom you represent.

Trusting you will accept of my excuses, I am, Gentlemen, with great respect, your obedient servant,

Thomas Gener.

To Jas. G. King, Esq. and others, &c.

[*From the New-England Magazine.*]

Mount Auburn.—"Let us go out to Mount Auburn," says some one of a gay party, just stepping into their vehicles or mounting their horses; and away they dash, full of life, and health, and beauty, to visit the mansions of Death, where he seems to reign in his most elaborate and yet solemn magnificence, reminding us, as they sweep by, to make a sober jest with the line of the poet—

"The paths of glory lead but to the grave."

"Let us ride to Mount Auburn," says the *ennuyé*, rising from dinner, with the prospect of a long afternoon before him; and forth they go, to rid themselves of Time, among the final homes of those who have exchanged it for Eternity. "Let us go out to the Cemetery," whispers the wife to the husband, as some lingering sunset is softening into twilight, half doubting lest he should check the wish, which he knows to spring from a mother's heart; but he yields to the request, and they visit the grave of their child, to strew a few flowers upon its new enclosure. "You must go out to Mount Auburn with us, this afternoon," says the citizen to the stranger; and thither they go, too, to talk learnedly of obelisks and monuments, national taste, Westminster Abbey, and Pere La Chaise. Reader, let *us* go, too; but let us walk, nor drive up in dusty splendor to the crowded gateway, tossing our reins to the keeper as we would to the ostler of a tavern.

And yet, notwithstanding all that sometimes offends the taste before you enter, in spite of the incongruity of ideas, which the crowd of vehicles and the looks of the riders will excite, when you are once within the enclosure, Fashion and the World, and Gaiety, and Splendor, are soon forgotten.—Standing in the dark groves, where the broken light falls down through the opening of the trees, and singularly possessed by the wonderful stillness of the place, the most distinguished air and the most fashionable tournure will pass unnoticed, when you would have turned to gaze, had you met them in the street. The visiters, too, one and all, no matter what their mood when they reached the gateway, are at once sobered and subdued, as soon as they have passed under those gathering shades. You shall see a young lady leap from the carriage, laughing in all the luxury of youth and health, and revelling in some jest which has been started; and when you pass her in an avenue, or meet her on the hill, she will be lost in contemplation, and forget to return your civilities, if you should not yourself be too abstracted to offer them. Still, the influence of the place is not a melancholy or a saddening influence; it is better—it is expansive and soothing, filling the mind with the beauties of nature, and thus breaking the force of any passionate expressions of affliction, which may be ready to burst forth, and uniting the great idea of death in general, with images and objects which are not shadowy and hard to grasp, but before us, around us, and familiar. We never go in there, without feeling the deep philosophy of the sentiment which Shakspeare has put into the mouth of Timon, when he makes him say, that he will make

> his everlasting mansion
> Upon the beeched verge of the salt flood;
> Which once a day with his embossed froth
> The turbulent surge shall cover;

thus expanding an individual feeling into the vastness and extent of the ocean itself, and depriving it of its bitterness by connecting it with the most magnificent image in nature. We think, indeed, that no one can go in there and give himself up to the spirit of the place, without feeling something of this expansion—this breaking away from the narrow localities of the dismal church-yard, and diffusing the thoughts over a space that admits and embraces greater sympathies with the creation. The moment the feelings are concentrated, if the subject be ourselves or our own griefs, that moment they are cramped; and when we dwell on the confined and ordinary habitations of the dead, with no images of beauty or magnificence to lead away the thoughts from decay and corruption, we are borne down by our feelings of grief, and disgust, and harrowing sorrow for the dead. But in these beautiful pleasure-grounds of Death, there is every thing needful to rob it of its terrors, while the place of the deposited remains is sufficiently indicated and exact, to give the feelings a spot on which to dwell. We never lose a certain sort of sympathy for the dead, which arises from placing ourselves in their situation and imagining—strange solecism! but actually one which we commit—imagining *how they feel*. If they are sunk beneath the ocean's wave, we follow them down into those all unvisited depths, where living man never has approached and never can. If, as with the ancients, their bodies are consumed, we strive to go in thought with each atom to the elements into which it is resolved; and when, at last, the resulting dust is gathered up, we would fain flatter ourselves that all is concentrated there. If they are placed in the common grave, we think, painfully, indeed, and with averted eyes, on the work of dissolution. Wherever they go, whatever disposition is made, thither we go with them, in waking hours and in dreams; and if any thing can be done to beautify the spot, it is so much taken from the cold, repulsive, cheerless condition, in which our feelings are ever presenting them to us. The history of sepulchral architecture and funeral customs has here a deep foundation in the necessities of our nature and condition. We cannot bear that the transition should be so sudden and complete, as it is in its original, unadorned, and simple state. We would make the dead to "stay a little longer," by surrounding them with things which really belong to this world, but which we have thereby consecrated to uses on the passage to the next. Why did the Indian lay the bow and arrow, and slay the dog, by the side of the dead?—Why did the Egyptian embalm and emblazon? Why do the natives of Southern Africa carry food and raiment to their cemeteries? Why do we busy our grief about the marble and the shroud, deeming it a sacrilege that the dead should be more meanly served than was their wont in life? Not solely in any of these cases, from a regard to decency and custom; but because we would feel, if haply we can persuade ourselves to do so, that they are not wholly beyond the consciousness of pomp and ceremony, and have not ceased to be within the sphere of circumstance. We would connect them back, if we could, by some of the things of sense, "the appurtenances of affectionate superstition;" and knowing that we cannot pass over the great gulf, really to minister to their wants, we solace ourselves by creating imaginary wants for that only part of them that is still within our reach.

But we are at the gate, and must drop our speculations. Reader, you may not have been there, if not a dweller in the neighborhood; or, if you have, it cannot be unwelcome to stroll with us again thro' the grounds. As you go in, there is the beautiful sarcophagus, chiseled in Italy, erected to the name of Spurzheim, who died among us, as if without a country, but as a citizen of the world, and a member of the human family,—meeting the visiter first, on his entrance, as if to remind him how completely all the members of this great family, whether of the East or the West, are mingled and united at the grave. A little farther on, lies all that was mortal of him, who ministered in the temple of Law, and whose spirit still lingers in the University, shining in the labors of his successor. Where is his learning now? Where his clear reasoning, his refined acuteness, his grasping intellect? They are active in that other sphere, for which the discipline of earth was meant to prepare them. And where is the gratitude of his pupils? Does the marble still sleep in the quarry, or has the chisel begun its work? As you turn to the right, in one of the larger dells, she who traced the recorded History of Religious Sects, lies buried; "First Tenant" of the Cemetery, who led the way, in her fullness of hope and usefulness, down into the new valley of death, at the head of that long train, which every day is gathering in.—Many other names meet the eye, of fathers and parents, who have here prepared the last resting-place for themselves and their families, even as in the city they have built fair, costly homes for their sojourn of life. And now we have wound our way up to the hill-top, let us pause, and look around, and think.

We are but beggarly at description, even with rich autumn woods and fair towns at our feet. But we cannot forbear to remind you of the river on the one hand, and the lake on the other, and the long stretch of marshes, with the University, and then, the city beyond. The city—with its thousand pulses of life, beating warm and quick, through the heart of society—how many eager hopes, vast plans, idle fancies, useful purposes, are there; how do they toil, and enjoy, and pull down, and build up, and then—*here!* here, where sleep cannot be disturbed, though the roar of twenty Babels were rising up into the peaceful groves, and where the unbroken goings on of nature seem to mock the fitful, feverish courses of man. Here the hand will fall, and the eye sink, and they be brought out, one after another, to lie here and take their rest. And still the world will go on, nature and society, nor be stirred in its heavy current by the falling of their stricken leaves. Do their thoughts ever come up here, to contemplate that final rest? Does the image of this spot ever rise up before them, in the haunts of business, or the throng of pleasure?

We remember, on the day when this place was consecrated, sitting down with a friend, and remarking, that the proprietors seemed in great haste to lay out the grounds, as it would probably be long before many interments would begin to be made. But the seal has long been fully set to that ceremony of words, by the consecrating presence of Death itself. Some, who were of the multitude here assembled on that day, now lie in the recesses, which they then admired, and, perchance, selected; and many more come daily to wander over the grounds, anticipating, perhaps even longing, for the time, when they, too, shall set up here their everlasting homes. The moral influence of such an establishment, in the immediate vicinity of a large city, cannot be too highly measured, or too often dwelt upon. It is here, that the prospect of death to ourselves, or that of friends, may become familiarized to the degree, and in the manner, that it ought to be; familiarized, by being divested of the old accompaniments, which have made it revolting, and, by being connected with much that is lovely, and tasteful, and new. Whoever thinks of visiting the common grave-yards in a city, to stumble over crowded mounds and old sunken monumental stones? Who can do so, but at the call of duty?—And who does not feel the inestimable blessing of going to the grave of buried friends, amid scenes and objects that do not render it an utterly repulsive task? "When the funeral pyre was out," says the quaint Sir Thomas Browne, "and the last valediction over, men took a *lasting adieu* of their interred friends." Now, indeed, the lasting adieu is taken, both of that which dies, and that which cannot die. But the place of rest can be visited with holy joy; the sorrowful is steeped in the beautiful; the dark, deep waters of affliction can flow on, imaging in their bosom the loveliness that can be caught on earth.—We have no fears that the fine effect should be lost; through publicity and the debasing purpose of a mere lounge for idle pleasure. The novelty will wear off, in a few years, both to the immediate neighborhood and to the more distant parts of the community; and, so long as the place retains its features of stillness and beauty, it will be impossible for levity often to invade its precincts, without sinking to the tone, which they inspire. There have been some few indications of a different spirit; but we have too much confidence in the natural influence of "whatsoever things are lovely and of good repute," to anticipate that it should be wholly lost on the public feeling.

We would say something of decorations and monuments, did we feel sure that our individual opinions are consonant to the intrinsic dictates of good taste and reason. Variety there must be, in these things, and ought to be; for the ornaments set up here, are but types and expressions in the variety of human feeling and affliction, now taking the form of hope and aspiration, now breaking forth in passionate expression, that cannot rise from under the weight of grief, and, sometimes, in fantastic conceits of sorrow, mingling images and thoughts that even verge upon the grotesque. But, in considering this subject, though there are, doubtless, in the sepulchral, as well as all other arts of decoration, certain principles of taste to be violated or to be followed, yet we have need, before we condemn, to cultivate a catholic and tolerant spirit. Whatever has been or shall be erected under the dictates of feeling and pious sorrow, will be sure to fall within the compass of the natural and the true; what is expressed in words, or figured in symbols, will be consistent with the heart and mind from which it emanated, and will embrace some of the forms and some of the ideas, in which the boundless variety of human grief and passion seeks its natural expression. We should go in there to admire or disapprove, precisely as we would go into the great field of human character itself.—Some are nearer to, some more remote from, the standard of perfection; but all were not made to be alike, and in all, we reverence the likeness of the Maker. So the grief and the piety of all men will not find its expression under the same forms, and by the same attempts at external and fixed ideas; and, therefore, one element of correct judgment, on such a point, must be a regard for that metaphysical and moral principle of variety, which runs through all nature, and all classes of ideas. We do not mean, however, to deny the cultivation of the public taste, by good models and long attention to the subject; our argument only is, that whatever is done from feeling, will be, in this high and universal sense, natural and tasteful.

The sun is gone down, and the moon is up,—the Autumn moon,—with its flooding light, filling the air with its cold, silvery shower, and struggling down through the thick foliage into the dark groves, far below. What Elegies would not Gray have written here! if, from a common church-yard, he could

so strike a chord that has sounded through the world. What Night Thoughts would here have swept thro' the mind of the melancholy, but pious Young! The burial-places of a city's dead! When a half century has passed, and when, of that active throng, the eloquent tongue, the skilful hand, the robust form of manly beauty, and the charm of female loveliness, shall all have come to moulder here, how will your borders be hallowed to that generation! How will the fond regrets, the deep remembrances, the generous pride of thousands, centre here! Let them live on, while yet they may, and busying eager life in all the ways which duty and pleasure have wrought out. Let them live on,—for the trees are now growing, that shall flourish over their graves, and the marbles are in preparation that shall record their simple story, or their elaborate eulogium. Let them live on—and buy and sell, and laugh and weep, and love and be disappointed, and press on and be checked in their eagerness. Let them live on,—for "there is a time for all things."

G. T. C.

A Chinese minister presented this instruction to one of the emperors of his day, who was then about eighteen years of age. It may be considered as an epitome on the art of governing:—"Fear Heaven; love your subjects; employ men of merit; be always ready to listen to good advice; lessen taxes; mitigate punishments; banish prodigality; avoid luxury; and give good example."

To the Editor of the New York American:

In looking over some of the letters of your late travelling correspondent H, I was struck with a request that some friend would throw his beautiful translation of an Indian Serenade into a different dress. Not aware that any one has done it, and trusting that he will pardon the liberty in a stranger, who has read the published letters with avidity and interest, and impatiently awaits the promised volume that is to contain the remainder, I send you the following version.

As I deem the native simplicity of the original translation its chief ornament, I have endeavored as much as possible to preserve it, but fear it has lost much of its beauty by being cramped into rhyme.—If, however, you find it to possess any merit, you are at liberty to correct, and do what you please with it.

Brightest bird of the prairie, awake thee! awake!
Let thine eyes, like the fawn, beam their gladness on me,
As flowers from the dew all their sweet odors take,
So my spirit its happiness borrows from thee.

Like their fragrance at noon is thy own balmy breath,
Or their sweetness at eve, when the red leaf is falling—
Of the freshest, my fair one, I've twined thee a wreath;—
Then awaken! awaken! thy own love is calling.

As springs long enchained by cold winter's strong hands,
In gladness bound upward to meet the warm sun,
So my heart leaps to thee, fairest flower of all lands—
So does my blood towards thee in one current run.

My soul sings in joy where'er thou art near,
As the branches of summer respond to the breeze;
But alas! when away, there is no one can cheer—
Then awaken, and bid my heart sing like the trees.

When thy glance speaks displeasure it saddens my heart,
As the river is darkened when clouds on it fall;
But the smile of thy face can fresh brightness impart,
As the sun, with his light, can the gold wave recall.

The earth smiles in joy and the waters beam bright—
The heavens in thousands of gay lustre shine—
Then awake! my adored! add thy own cheering light—
For without thee I smile not; but in deep darkness pine.

Sept. 1834. ANNA.

[For the New York American.]

When this mortal shall have put on immortality, *then* shall be brought to pass the saying that is written, Death is swallowed up in victory.

Hear, earth, through all thy depths, the dread decree,
Jehovah's fiat, thou no more shalt be!
The gloom and glory of thy ancient brow
No more shall deck the firmament; and thou
Must cease the vasty steep of space to climb;
And sink, as thou began'st to mount, with Time.
But first, oh earth! deliver up thy dead;
All, all; the hand that smote; the heart that bled;
The unwasted, tear-wet form of yesterday;
The dust that knows ten thousand years decay;
The kindred atoms which disunion mourn;
The viewless ashes of the ruin'd urn!
Then, wreck'd in heapy chaos, forth be hurl'd,
And roll no more, a mortal bearing world.

Come forth, ye dead, to judgment! Lo, the doom
That veil'd and fed corruption, flies the tomb!
Death hidden in his deep'ning shadow lies,
And, Empire lost bewailing, shrieks and dies.
See! from its God the soul returns to be
The incarnate beautifier, dust, of thee;
And brightly waft thee to her native shores,
Whose spirit-hearted love all love adores?
Now, now the triumph is indeed complete;
Death and the grave lie vanquish'd at the feet.
Arise, and breathe the life of endless day,
Above consuming worlds, and heavens that pass away!

E.

CHOICE WINES, &c.

THE subscriber offers for sale, a large assortment of Wines consisting of

Madeira—In pipes, hhds. and quarter casks, of different qualities and brands, part received direct, and part via East Indies. superior old L. P. in hhds. quarter casks, and half quarters.

Also—in cases of 1, 2 and 3 dozen each, old and choice.

Sherry Wine—Pale and brown, in wood and glass, of different qualities, from 14s to 36s part of it imported by order.

Port Wine—In hhds. and quarter casks. Also, in cases of 1 and 2 dozen each.

Hock Wine—A large assortment, of various brands, qualities and vintages, in cases and hampers, some very old.

French Wines.—Sparkling Champaign, of all the favorite brands, quarts and pints, with and without wax on the corks. Also, Pink Champaign.

Sauterne, Vin de Grave, and Burgundy.

Bordeaux Claret, Lafitte, Chesteax Margeaux, Leoville, St. Etephe.

Low priced, in boxes and casks.

Muscat, in boxes and small casks. Old Malaga Sherry, a fine light wine, in casks of 18 and 30 gallons each. Marseilles Madeira, in quarter casks and Indian barrels. Canary, Malmsey, and Teneriffe, &c. &c.

Bottles.—Wine, Porter and Claret, in hampers, one gross each. Demijohns.

Hibbert's Porter.—London Porter, Brown Stout, and Pale Ale, in casks of 7 dozen quarts, and 8 do. pints.

Scotch Ale.—Younger & Co's Pale Ale, qts. and pints, &c. &c.

Salad Oil—Bordeaux and Marseilles, in boxes and baskets. Olives, Capers and Anchovies.

Fruit—Bunch and Muscatel Raisins, Almonds, E. I. Preserves and Canton Ginger.

Coffee, &c.—Old Java and Manilla, Souchong Tea, Refine White Sugars, &c.

Part of the above are entitled to debenture, and will be sold in lots to suit purchasers. Orders received, and forwarded as directed.

ROBERT GRACIE,
a27 20 Broad sreet.

UTICA AND SCHENECTADY RAILROAD COMPANY

PROPOSALS will be received until the last Monday of October next, at 12 o'clock at noon—

For grading about sixty-five miles of the Utica and Schenectady Railroad, between the Sand Ridge on Sanders' Flats in Schenectady, and the western boundary line of the town of Herkimer;

For the masonry within those limits, embracing the culverts, and the abutments and piers of the repective bridges; and

For the wooden superstructure of bridges across the Cayadutta Creek at Caughnawaga, the Garoga Creek at Palatine Church, the East Canada Creek at Manheim, the Gulph at Little Falls, and the West Canada Creek at Herkimer.

The line will be divided into sections of about one mile each, and prepared for examination, and maps, profiles and plans deposited for inspection with W. C. Young, the chief engineer, at Schenectady, ten days previous to the time above mentioned.

Blank forms of proposals will be furnished at an early day at the company's offices at Schenectady, Palatine, Little Falls and Utica.

The names of persons to whom contracts are awarded (who will not be permitted to sub-contract the same) will be made known at Schenectady on the 29th day of October, when it will be required that the grading proceed without delay, wherever, and soon as titles to the lands are acquired by the company; that the culverts and small bridges be completed by the first of August next; that the residue of the masonry and the large bridges be finished by the 1st of October thereafter; and that the grading be completed during the year 1835. Contractors to furnish security for the faithful performance of their contracts.

The use of ardent spirits to be prohibited in constructing the road.

Proposals, post paid, to be endorsed "Proposals," and containing the names of the persons offered as securities, to be addressed to the undersigned at Schenectady, or deposited at the company's office at that place. September 4, 1834.

G. M. DAVISON, Commissioner
s 17 to27 Utica and Schenectady Railroad Company.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to.

DEAN WALKER a 30

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation.

J 25 tf

RAILROAD CAR WHEELS AND BOXES,

AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy submit them, upon application, to any person desirous of perusing the same. m20

Rocky Mountain Correspondence.

[*From the Missouri Enquirer.*]

The following letter received by us may be interesting to a number of our readers. Mr. Edwards, (the author,) is a gentleman about 21 or 22 years old, and well known to many of our readers as a young man of worth and promise. His object at the Rocky mountains was to civilize the Flat Head Indians. He was employed by and accompanied the Messrs. Lees, who were appointed by one of the Eastern Conferences to establish a mission among the above-named Indians. We expect to hear from him again some time during the approaching Fall; when it may be expected that we shall have a more particular account of the country, and manners and customs of the natives.

Waters of the Colorado of the West, June 23.

With regard to our manner of living, I must here remark that the usual order of nature is inverted. The vulgar adage "bread is the staff of life," is here unknown, or if known at all, is known to be false.—Meat is here (to be a little pedantic) the *sine qua non*. I have often smiled to think how those friends with whom we have surrounded the festive board would laugh to see us seated, in the Turkish style, round a ponderous dish of buffalo meat, sometimes without salt, or feasting on the exquisite marrow of a bone with as much *gusto* as if he had literally obeyed the precepts of the Spartan cook. But you must not hence conclude that we have no variety. We sometimes have it fried, sometimes roasted, and sometimes boiled. A large copper kettle full of tea or coffee placed beside our other dish constitutes a r past on which we feed with appetites at which your pale and capricious dyspeptics might smile with a contemptuous sneer. Notwithstanding the watching, toils and privations of the journey, we have nearly all increased in health and strength.

A well delineated description of these hardy mountaineers would surely be an interesting production. At this great Western Metropolis, I mean the general rendezvous of mountain traders and trappers, you could see men from almost every country, and almost every shade of character, from the dark sons of Africa to the tawny aborigines, the creole Canadian, the once polite American, and the adventurous European.

Here is the hardy mountain veteran who has ranged these wilds for more than thirty years. Pecuniary emolument was perhaps his first inducement, but now, he is as poor as at first. Reckless of all provision for the future, his great solicitude is to fill up his mental insanity by animal gratification. Here is the man, now past the meridian of life, who has been in the country from his youth, whose connections and associations with the natives have identified his interest and habits with theirs.

To form an adequate conception of their apparel, you must see it. A suit of clothes is seldom washed or turned from the time it is first worn until it is laid aside. Caps and hats are made of beaver and otter skins, the skins of buffalo calves, &c. Some of these are fantastically ornamented with tails and horns. These ornaments may be badges of distinction, for aught that I know, but being a stranger in the country, I am not able to speak decidedly. You will perhaps recollect to have seen in the 'far west' of our own United States, the buckskin hunting shirt and leggings gracefully hung with fringes along the arms and side. But I am sure you have never seen the tasty fashion of fringes carried to perfection. Here they are six or seven inches long and hung densely on every seam, I believe, both of the hunting shirts and leggings. Indeed their weight is a great burden. But it is perhaps advisable, under existing circumstances, that I should leave your imagination to apply the picture. There is, doubtless, many a generous and magnanimous heart couched under the above general outlines, nor must you suppose that these remarks are applicable to all; for there are exceptions to all general rules.

Two gentlemen, a Mr. Pierce and Mr. Bush, I understand, fell victims to the savage malevolence of the Black Feet Indians, a short distance from this place, some time last winter.

Professor Nuttall, of Cambridge, Massachusetts, who accompanied us for the purpose of making botanical inquiries, has met with the most flattering success. Mr. Townsend, the ornithologist, from Philadelphia, who also accompanied us, has surpassed his most sanguine expectations. Last evening he informed me that he had discovered fifteen new species of birds, six that were doubtful, and twenty that were lately found. It is the intention of both these gentlemen to explore the Oregon Territory.—From their unremitted exertions, I fondly anticipate that the result of their labors will be many interesting accessions to their respective sciences.

We left Liberty, as you may recollect, on the 25th of April, and arrived at this place (a distance of about eleven or twelve hundred miles) on the 20th instant; few difficulties having occurred on the way, excepting those which are inseparable from the trip. We have not been further north than latitude 43 degrees and 10 seconds, which was on Sweet Water, a tributary stream of the Platte. We are now in latitude 41 degrees 43 seconds, longitude 112 degrees 34 seconds west from Greenwich. I must here remark that much credit is due to Captain Wyeth, for the manner in which he has led us forward. This gentleman unites in his character, qualifications not always to be be found, untiring prudence and circumspection, with unhesitating bravery and perseverance.

In a company composed of such a variety of characters as a Rocky Mountain Company usually is, it might reasonably have been expected that we should sometimes be placed in disagreeable circumstances, yet it is due to the whole to say, that we have almost invariably been treated with politeness and respect.

On our arrival at this place, we saw some few of the Indians, among whom it is expected we shall locate. They appear eager for instruction in literature and the principles of the "White man's religion." From this circumstance, and the information we have been able to collect from other sources, we indulge a pleasing hope that open arms await us.—Surely every philanthropic heart must ardently desire the dissemination of knowledge and revealed truth among this honest, moral, and yet superstitious and unhappy people.

The distance we have yet to travel before we reach the Pacific Ocean is estimated at something like a thousand miles. We will then have to retrace six or seven hundred miles of our journey. But with regard to our future operations my information is very vague and imperfect. I remain yours, with sentiments of respect.

P. L. Edwards.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better ustice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

New York Farmer and American Gardener's Magazine.

Mechanics' Magazine and Register of Inventions & Improvements.

American Railroad Journal and Advocate of Internal Improvements; and the

New-York American, *Daily, Tri-Weekly*, and *Semi-Weekly*, *either* or *all* of which may be seen and obtained by those who wish them' by calling at 347 *North Market street, Albany*.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13 1y

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, *Flat Bars* in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

200 do. 1½ do. ¼ do.
40 do. 1¼ do. ¼ do.
300 do. 2 do. ¼ do.
300 do. 2½ do. ¼ do.
soon expected.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2½, 2⅝, 2¾, 3, 3½, 3¾, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 21 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf R M & F

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

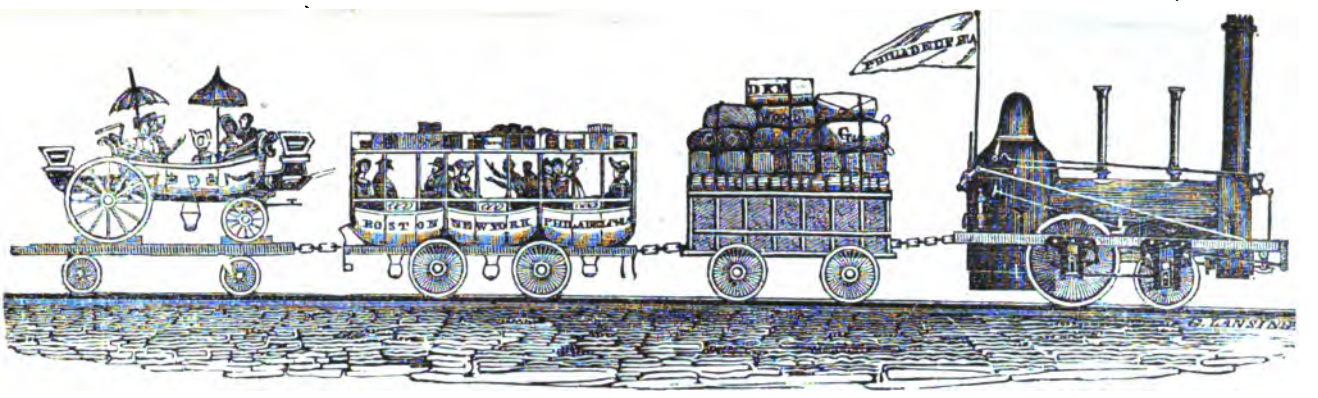
Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
ml 1y Germant. and Norrist. Railroad



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] **SATURDAY, OCTOBER 18, 1834.** [VOLUME III.—No. 41.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, OCTOBER 18, 1834.

We would invite the attention of our readers in general, and the inhabitants of that section of country referred to in particular, to the able arguments contained in the letter of J. McAdam, Jr., which is unavoidably placed on our eighth page.

"The Society of Civil Engineers has obtained from the Crown a charter of incorporation,"

We have inserted the above notice, taken from the last number of the London Mechanics' Magazine, with the intention of devoting the editorial column of this week's paper to a consideration of the importance of a like institution to the cause of internal improvements in our own country.

In a conversation which the editor of this paper had some time since with one of our most scientific engineers, the question was asked, "Why is it that while the character and merit of the different works of Rennie, Telford, Stephenson, Vignoles, and other English engineers, are familiar to most of us here, nothing scarcely is known to them of works in this country, that would not suffer by a comparison with the best of those abroad?" He replied "We want a 'Society of Engineers,' with a suitable periodical to publish their proceedings; and until something of the kind is formed, we shall continue to labor under this disadvantage, that while the members of it have given ample evidence that there is an equal amount of talent and information in the profession here, but little credence will be given to the fact beyond the limited sphere of the directors and company of the work constructed." For the truth of our friend's remark, we can appeal with an honest pride to such works as the inclined planes of the Morris and the aqueducts of the Erie canals. The tunnels, planes, and viaducts of the Allegany Portage, and Baltimore and Ohio railroads, the hydraulic constructions of the Delaware and Raritan, and Delaware and Chesapeake canals, and the thousand other different works to be found on the numerous canals and railroads of our country. We have breakwaters, artificial harbors, aqueducts and reports on aqueducts, bridges, light-houses, dry docks, and wet docks; and, in fact, artificial constructions of every kind, inferior in boldness of conception or skill of execution to but very few of the boasted works of the English or French engineers. If in a densely settled country like England, with every facility of visiting and becoming acquainted with each other's works, it has been found necessary for the preservation of the dignity of the profession, and for the dissemination of mutual experience, to form themselves into an incorporated society, how much the more does it become necessary for the profession here, to adopt some similar measure. From the comparative paucity of their numbers, they are scattered over an immense section of country, and though, oftentimes two, three, or more works, may from their proximity be under the charge of one person, still from the progress of internal improvement in this country, the profession, from its inadequacy to supply the companies that are daily forming with suitable persons to construct their works, will be daily liable to abuse. Some terprising carpenter or mason of the neighborhood, becoming possessed of a level and compass, styles himself an engineer, and is forthwith, for want of a better, employed by them as such. That some of our most distinguished engineers have commenced in a like manner, no one is more fully aware than ourselves, yet while, from sound judgment and great ability, they have been enabled to elevate themselves to the highest standing, we are constrained to regard them only as glorious exceptions to the general rule. If the remark is not applicable as a general rule to those who thus commence, why is it, we would ask, that, young as our country is, we already have to lament over so many abortive experiments?

If such an institution as a "Society of Civil Engineers" existed among us, our companies would, as a matter of course, look to its members as the proper persons to which to entrust the charge of their several works. Those entering the profession would naturally connect themselves with some one engineer whose reputation for ability would thus become publicly known, and under whom they could attain that information and experience which would in turn enable them to supply the places that must one day become vacant. That an efficient remedy for the evils we previously stated would be found in such an institution, we firmly believe, and in that belief would cheerfully open our columns for communications on the subject; and as an ardent advocate of the cause of internal improvement, we pledge ourselves that no exertion shall be wanting on our part, that might conduce to carry into effect a measure in which we think the best interests of that cause are so deeply concerned.

Canal of Burgundy.—The line of internal navigation, which this magnificent undertaking has at last completed, extends from Havre de Grace to Marseilles, and is of the length of 300 leagues and upwards. It was commenced by the states of Burgundy in the year 1775, continued during the imperial sway of Bonaparte, and resumed in the year 1822. The whole sum expended upon it, from first to last, amounted to 40,000,000 francs, (£1,000,000.) Its actual length from St. Jean de Losne to the village of La Roche, where it meets the Yonne, is 242,-572 metres, or 795,830 feet. It is provided with 189 sluices.

A Canal uniting the Rhine with the Rhone, and 246,000 metres (or 807,085 feet) in length, has likewise been opened; it begins at St. Symphorien, where it joins the Saone, and passes into the Rhine at a village called Kilstett, near Strasburg. It has also a branch leading from Mulhausen to Basle. The expense of constructing this canal was much less than that of the canal of Burgundy, as there were fewer difficulties to overcome in forming it.—[English paper.]

Substitute for Railroads and Canals, embracing a New Plan of Roadway, combining, with the Operation of Steam Carriages, great Economy in carrying into effect a System of Internal Improvement. By ROBERT MILLS, Engineer and Architect.

[Continued from page 626.]

NO. XIV.

The economy of the new plan of roadway, both in its execution and operation with steam carriages, being now established, I shall proceed briefly to describe its mode of construction:

After the line of road has been properly graded, so that no rise or inclination exceeds three degrees, proceed to lay out the space into wheel tracks (two or more, according to circumstances,) of the usual carriage width between the wheels, and form these tracks into paved ways of suitable breadth, and of a shape particularly adapted to the safe travel of the wheels, to prevent their leaving the track, except at the will of the steersman.

Where locomotive carriages only are to travel the road, it will not be necessary to pave between the tracks, by which much expense will be avoided.

These track ways may be paved either with metal stone upon the McAdamized plan, or with the quarry stone, fairfa e upwards, (as the streets in the new part of Baltimore are paved,) or with flag stones laid upon a gravel bed, or with solid blocks of granite, or any hard stone. The cross sections of these paved tracks to present a *concave* surface, so that the wheels running over them should have no tendency to fly the track.

Upon the most perfect plan of construction, these paved tracks would be little inferior to railways upon the level, and much superior where an *ascent* is to be gained, as the *bite* of the wheel upon the *stoneways* is sufficient to enable a steam carriage to ascend a hill rising six hundred feet in the mile, when on a railway the same carriage would scarcely be able to carry *itself* up an inclination rising two hundred feet in the mile. This is an important consideration, where the motive power is to be steam; as the same power which would propel the locomotive carriage with its load on a horizontal road fifteen to twenty miles an hour, would enable it to ascend a hill rising three hundred feet in the mile, at a speed of five miles an hour, without difficulty.

The vast expense, therefore, of making a railroad over a hilly country, may, by the proposed plan, be avoided; and thus a serious obstacle in effecting an important improvement, be removed.

NO. XV.

The new roadway proposed will be found to embrace many advantages, in a public point of view, which a railway cannot possess. The steam carriage, after running to the end of this road, for instance, in entering a city, would be able to traverse any of its streets and communicate with every part of it: this advantage the railroad locomotive cannot realize, from the particular construction of the wheels. Again, this new roadway, from the tracks being spaced to correspond with the division of common carriage wheels, other vehicles besides those that are locomotive may travel it, and thus the public convenience be accommodated at the same time that the proprietors of the road would receive the full benefit of their improvement. This description of road, from this circumstance, would certainly be more popular than a railway, as it would possess the advantage of canals in giving to every one an opportunity of using it.

Again, from a series of experiments made in England, on a part of the Liverpool and Manchester railway, to determine upon the practicability of impelling *carriages* upon a railway, by means of a power derived from the inequalities or undulations of the line, it appears that the correctness of the theory advanced by the inventor, Mr. Badnall, was so satisfactory, as to leave no doubt of the soundness of the principle. Should future results from experiment confirm present impressions on the value of this discovery, the obstacles to making a road over a hilly country will be almost entirely removed.

NO. XVI.

The *undulating roadway*, which was referred to in the preceding number, appears (says an eye-witness to the experiments made) to have something extremely feasible in the plan; and being one which can be tested by actual experiment, no extraordinary credulity is involved in giving a serious consideration to its practical applicability. It rests upon one of the simplest laws of nature, which is within the daily experience of almost every individual. We all know that a wheeled vehicle, or any other body, moving freely down a declivity, accumulates a degree of velocity within itself, which will propel it a certain distance after it has ceased to be acted upon by the descent of the road. This momentum will be the greater weight of the body, which is all in favor of the object to which the inventor proposes to apply it. In order to discover how far the impetus acquired in falling down one slope of an undulating road would be availing in impelling a train of carriages over the next, the experiment is very simple; a certain degree of velocity being given to a load at the foot of an ascent, sufficient to carry it to the summit, we have only to ascertain whether an equal degree of velocity could be given to the load by its own passage down a plane of the same inclination. For this purpose it is only necessary to allow the load to traverse the plane in a reverse direction, and ascertain the velocity with which it again passes the foot of the ascent.

The following experiments, to test the principle, were made in the presence of Mr. R. Stephenson, Senior, Messrs. Dixons, Daglish and Badnall, Engineers.

Experiment 1.—The Liver engine and a load of thirteen wagons, weighing in all about seventy-two and a half tons, after traversing a distance of three-fourths of a mile, to acquire a sufficient velocity, ran up the inclined plane two hundred and seventy-eight yards: the time occupied in performing the latter distance being ninety seconds.

Experiment 2.—The power being reversed, the engine and train *descended* two hundred and seventy-eight yards: the time occupied in the descent, viz. from a state of rest to the point from which the time of ascent had been calculated, being only fifty seconds. The 3d, 4th, 5th, and 6th experiments differed but a few seconds from the above, and the average was as follows:

Total space passed over to generate the velocity, one thousand three hundred and twenty feet.

Time occupied in ascending two hundred and seventy-eight yards, eighty-one and two-thirds seconds.

Total space passed over in generating the velocity on inclined plane, two hundred and seventy-eight yards.

Time occupied in descending two hundred and seventy-eight yards, forty-six and one-sixth seconds.

It is almost needless to add, that these experiments have most fully confirmed the undulating principle, and proved beyond all doubt that a locomotive engine and load can traverse a curve or undulation, whose two summits are of equal altitude, with much greater rapidity, and consequently with far greater economy of time and power, than a level road of proportional length.

NO. XVII.

It being the opinion of Mr. Badnall, that if a velocity of twenty miles an hour were attained at the foot of the plane by two engines, it would be proved by experiment that an engine could move from one summit of an undulation to another summit nearly, if not quite *double*, the load which that engine was capable of moving on a level: it was determined by the gentlemen present to decide this important question in a few days.

We shall, therefore, soon learn the result of these experiments, which will determine the value of this improvement in the undulating line of roads. From what has been proved, it is evident that no disadvantage can arise from an undulating road, to the carriage travelling thereon; but on the contrary, a positive advantage both in speed and power. Consequently, a hilly or rolling country would offer no serious impediment to the construction of roads where locomotive carriages are to operate; and we may judge what an expense would be saved, by avoiding the cutting down of hills to form a level road. This invention, therefore, if future trials should substantiate the truth of the principle applied in practice, will add much to the economy of constructing the proposed plan of road, and increase the effect of the steam carriages working on the same.

NO. XVIII.

Having thus briefly exhibited the advantages of the new plan of road proposed, especially on the ground of economy, little more, in a general way, remains to be said further, than to urge upon all those who are projecting and carrying into execution plans of internal improvement, the expediency of adopting this new system of roadway, as promising to secure a more profitable return of interest on the capital laid out, than can be realized from any other plan either of railway or canal. In a level country there would exist a considerable disparity in the cost of the two systems of improvement.

The average expense of laying a double line of tracks on a railroad, independent of grading, is $11,628 per mile; the cost of a thorough double paved way upon the plan proposed, exclusive of grading, is $4,000 per mile; and if the wheel tracks are only paved, $2,500 per mile. Difference in the case of a thorough pavement, $7,628 per mile. Difference in the case of the wheel tracks only paved, $9,128 per mile. So that in a road one hundred miles long, there would be a saving, in the best plan of trackway, of $662,500; and on the cheapest plan, of $912,800.

Should we take into calculation the expense of *grading*, upon the two plans, there will appear another large difference in favor of the proposed plan, where a hilly country has to be passed: this has been already shown in the instance of the railroad projected between this city and Baltimore; and I would again call the attention of the proprietors of this road, to the immense saving they would realize by adopting the substitute proposed, not only in the cost of the road, but in the motive power used, or rather in the rate of transportation to be charged, as a passenger could be conveyed from city to city on the new plan of road and with equal speed for only one dollar, and yield the company a better interest than the charge of two dollars and a half on a railroad, which large sum it is necessary to demand, to meet the heavy interest accruing on the capital embarked or to be laid out on the work.

In the great project which the writer had the honor to submit to the late Post-Master General, (Judge McLean,) some years ago, to construct a railroad from Washington to New-Orleans, passing through all the seats of Government of the sea-board States, with what economy this important work might be executed upon the plan proposed. Passing chiefly through an alluvial country, little grading would be required, therefore assuming the distance between the two points to be one thousand two hundred and fifty miles, a paved way upon the plan proposed may be estimated to cost about six millions of dollars.

Companies engaged in projecting works of internal improvement, and desirous of further information on the subject contained in the preceding papers, by addressing the subscriber, (post paid) will have their inquiries answered. ROBERT MILLS,

Engineer and Architect, Washington City.

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SUMMARY OF FACTS.

1. Carriages, propelled by steam have averaged a speed of ten miles per hour, on *common roads;* and on good roads, with the same power, they have been propelled at the rate of thirty miles per hour, for four hours and a half together, with nineteen passengers.

2. They have ascended hills of considerable rise, (1 in 6,) at sixteen and a half miles per hour, loaded with people; they experienced no difficulty in travelling over even the worst and most hilly roads; and further, they were capable of overcoming any ascent which carriages drawn by horses could accomplish, and with much more facility and safety.

3. The saving of expense to travellers, by the substitution of steam for that of horse power, is from *one-half* to *one-thirds*, even on *common roads;* and upon a *good road*, adapted for the operation of these carriages, the expenses of transportation would be reduced to *half* this amount, probably *one-fifth* or *one-sixth* that of horse power.

4. They are perfectly safe for passengers; less liable to accident than where horses are used; more manageable in the higher velocities; and their speed capable of being checked at pleasure, in a very few moments.

5. Steam carriages will be found *superior*, working on good stone roads, to the operation of the same power or railroads—1st, From their capacity to ascend and descend hills, perfectly inaccessible on railroads—2d, From the greater speed which may be given them with safety, and the ease with which they may be checked when requisite, or when encountering an obstacle—3d, From their being able to travel in any direction, making short turns, or the entire sweep of the circle, in a small compass; which advantages will enable them to carry their passengers to any point in a city, which the locomotive carriage on a railroad could not effect without laying a track for this purpose.

6. By the use of steam carriages on good stone roads, a vast saving of expense to the country would result, as the difference of cost between such stone roads and railroads or canals, would be at least two-thirds; so that, if 60 miles of railway or canal cost $1,200,000, a good stone road would cost but $400,000.

7. By the use of steam carriages, the expense of repairs of the road will be much reduced, as it has been proved that *horses* do the *chief damage* to roads; the carriage wheels but little.

8. The genèral introduction of steam carriages on these roads will have the effect of *removing horse power*, "a most unproductive laborer," says Mr. Gurney, "and a dead expense to the country." The advantage to the nation will therefore be in a direct proportion to the substitution of steam for horse power.

The consumption of a horse is equal to what will support eight persons; so that by every horse removed, and supplied by elementary power, the maintenance of eight individuals is provided for. In times of scarcity, this advantage would be sensibly felt in the country, and more especially in the manufacturing districts.

NEW ORLEANS, SEPT. 19—*Comical Accident.*—Yesterday the Locomotive Creole of the Railroad, being ready to start for the city, with several cars attached, having been left by the engineer for a few moments, started backwards with full steam, and safely deposited itself and the cars in twelve feet water at the end of the wharf.

On the Location of Railroad Curvatures; being an Investigation of all the Principal Formulas which are required for Field Operations, in laying Curves and Tangent Lines, to pass through Given Points. By J. S. VAN DE GRAAFF. Continued from page 628.

[For the American Railroad Journal.]

It frequently happens, in tracing curves for the superstructure of a railroad upon a graded surface, that AX will represent a *fixed* tangent, and that the point A′ will represent a station in a curve which is also *fixed*, and to which A′X′ is a tangent at that point; and it is then required to pass that curve into the curve AA′ at the station A′ and upon the *common* tangent A′X′. In such a case it will always be the best method, after the necessary modulus of curvature has been computed by means of (XVII), to trace the curve from A′ towards the other origin at A. For then the two curves will meet at A′ with an integer chain; and the broken chain will come in more conveniently, at the other extremity of the curve, where it meets the given tangent line AX.

The formulas (XVII.) and (XVIII.) will also, in some cases, be highly useful in conducting the location of a line with facility. Suppose, for example, that AX be a given tangent line, whose direction is fixed by some former curve, and particular local circumstances; and let the line A′X′ represent the direction of some bluff, or other obstacle, which makes it desirable for that part of the contemplated road to occupy ground which will correspond with the line A′X′, or differ from it as little as circumstances will permit. In this case, then, having selected any convenient point K, in the given tangent line AX, for the origin of co-ordinate axes, let the system of rectangular lines

$$\left.\begin{matrix} X = a + b + c + \text{&c.} \\ Y = d + e + f + \text{&c.} \end{matrix}\right\},$$ be traced from that origin, and terminating in such a point A′ as the nature of the ground *and the levels* may require. Then placing the instrument at A′, deflect into the proper direction A′X′, and thus measure the angle BA′X′. Having then all the requisite data for computing the origin A, and the necessary modulus of curvature, to pass a curve through the point A′ and into the direction A′X′, let those items be calculated. It will then be seen, at once, whether the point A′, and the direction A′X′, can both be maintained within the limits of the desired expense and curvatures; and if not, then either some other point A′ must be taken, or some new direction must be assumed. These facts should be always ascertained, and the most judicious line definitely selected, *before any curve is actually traced.* It is, however, necessary to observe here, that, in the location of a line preparatory to the graduation, it will be very seldom proper to trace a curve backward from any selected point A′ to meet the line upon a given tangent AX, as was recommended in the case of a graded surface. For in the first location, integer chains should be always retained when practicable; and which cannot be easily done without tracing the curves and tangent lines continuously. In the case, then, last considered, the following principles should be observed: After the point A′ and the direction A′X′ have been finally selected, and the requisite origin A, together with the modulus of curvature for the required curve, have been already calculated, if that origin does not fall upon the tangent line AX at an integer chain, then select the nearest integer chain for the true origin; and compute a *new modulus of curvature*, which will pass a curve from that latter origin through the designated point A′. It is then very evident that the direction of this curve, in passing the point A′, will differ but little from the direction of the former curve at the same point. When therefore the curve, as last selected, has been laid within one or two chains of the designated point A′, let such a variation be made in the modulus of curvature, for the remaining chain or two, as will restore the *parallelism* of the two tangents, agreeably to principles which will be obvious enough from (V.) In this manner the true direction will be obtained; and although the line will not then pass exactly through the desiguated point A′, yet it will not vary a material distance from it.

When this system of operation is to be pursued, it will always be convenient, in selecting the arbitrary point K, to take it at an integer chain, counting from the termination of the line as actually laid into the given tangent AX; and then if $\propto$ does not appear from (XVIII.) to be an integer number of chains, select the nearest integer number to it, and the co-ordinates by which to compute the *new modulus of curvature*, from (XII.) will evidently be $X + \propto$, and Y, regard being had to the proper sign of $\propto$, as already explained.

19. Although a system of rectangular lines, traced from given co-ordinate axes, will in general furnish the best data for computation, yet cases sometimes occur when those calculations have to be made from computed curves or curves already laid upon the ground. In a first location, this case will sometimes happen, when, from difficulties which are found in advance of a line, it becomes necessary to change a part of that which was either already computed, or actually laid. Such a case will sometimes occur even when the operations in the field have been skillfully conducted; and in laying curves upon a surface already graded, it will be frequently necessary to compute from curves actually traced; for in that case it will be often required to notice the particular situations of several stations in a curve or tangent line, and which cannot be so readily done in any other manner as by actually laying an approximate line upon the ground. The *notes* of those approximate lines are, moreover, in such cases, *always furnished* from a former survey.

20. Suppose two curves to be laid upon the same tangent line, and let $\propto$ denote the distance between their origins. Let one of those curves have a given modulus of curvature denoted by T, and let it pass through a certain given point at the extremity of the *n*th chain. It is then proposed to find the modulus of curvature of the other curve, such that it may also pass through the same given point; and it is likewise required to determine the angle of intersection of the two curves at that point.

The co-ordinates of the given point, taken with reference to the origin of the required curve, are obviously, $x \pm \propto$ and y; and consequently, taking T′ to denote the required modulus of curvature, its value will be expressed by

$$\text{Sin. } T' = \frac{y}{x^2 + y^2 \pm 2\propto x + \propto^2},$$ as appears from (XII.) Hence, substituting in this expression, for x and y, their values* as obtained by (VII.), the following theorem will be the obvious result:

$$\text{Sin. } T' = \frac{1 - \text{Cos. } 2nT}{\frac{1 \text{ Cos. } 2nT}{\text{Sin. } T} \pm 2\propto . \text{Sin. } 2nT + 2\propto^2 . \text{Sin. } T} \qquad \text{(XIX.)}$$

The formula thus obtained will be found to be quite convenient for purposes in the field, when the curves are too long to be within the limits of the more simple approximating methods, which will be hereafter explained.

With regard to the double sign, it must be observed that the *negative value of* $\propto$ obtains when the origin of the curve sought is in *advance* of the origin of the given curve, with respect to the direction in which the curves are laid from their origins; and the *positive* value must be taken in the contrary case.

In order to determine the angle of intersec-

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* *Note.*—By squaring each of the two formulas given by (VII.), and adding the two squares together, the following expression will result after a little reduction:

$$x^2 + y^2 = \frac{1 - \text{Cos. } 2nT}{2 \text{ Sin. }^2 T}$$

This is, however, not the form which a formula should have for computing the numerical value of $x^2 + y^2$; but it is useful in reducing other formulas.

tion of the two curves, take D′ to denote the number of degrees and minutes contained in the curve whose modulus of curvature is T′, between its origin and the given point, and which will, consequently, by (I.) and (IV.) also express the inclination of the required curve, at that point, to the *common tangent* at the origins. The value of D′ will then be expressed by

$$\text{Cot. } \tfrac{1}{2}D = \frac{x \pm \propto}{y},$$

as appears from (XIII.) Now, substituting in this expression for x and y, their values as given by (VII.), the following formula will be the result:

$$\text{Cot. } \tfrac{1}{2}D' = \text{Cot. } n\text{T} \pm 2\propto . \frac{\text{Sin. T}}{1 - \text{Cos. } 2n\text{T}}. \quad \text{(XX.)}$$

The value of D′ being thus obtained, the required angle of intersection will be expressed by $2n\text{T} - \text{D}'$; as evidently appears from (V.)

Example 1. Let the modulus of curvature of the given curve be 30′, and let the given point be at the extremity of the 60th chain. Supposing the origin of the other curve to be placed 10 chains *back* upon the tangent line, what will be the new modulus of curvature, and what will be the angle of intersection at the given point?

In this case,

$$\text{Sin. T}' = \frac{.50000}{\frac{.50000}{.00873} + 20 \times .86603 + 200 \times .00873}$$

$$= \frac{.50000}{57.299 + 17.321 + 1.746} = \frac{.50000}{76.366} = .00655;$$

and consequently, T′ = 0° 22½′ = required modulus of curvature. And, Cot. ½D′ = 1.73205 + 20 × $\frac{.00873}{.50000}$ = 1.73205 + 20 × .01746 = 1.73205 + .34920 = 2,08125; and therefore, ½D′ = 25° 40′; or, D′ = 51° 20′. Hence, 2nT — D′ = 60° — 51° 20′ = 8° 40′ =, the angle of intersection required.

Example 2. Let the modulus of curvature of the given curve be 2°, and let the given point be at the extremity of the 31st chain. Supposing the new curve to be commenced one chain in *advance* upon the tangent line, what will be the required modulus of curvature, and what will be the angle of intersection at the given point?

Here, T = 2°, and $n = 31$; and consequently 2nT = 124°. Hence, in this Case, cos. 2nT becomes *negative*, while Sin. 2nT remains positive, agreeably to the principles of trigonometry. Also, in the present example, $\propto = -1$. Under those considerations, the formula (XIX.) gives,

$$\text{Sin. T}' = \frac{1 + \text{Cos. } 56°}{\frac{1 + \text{Cos. } 56°}{\text{Sin. } 2°} - 2\,\text{Sin. } 56° + 2\,\text{Sin. } 2°}$$

$$= \frac{1.55919}{\frac{1.55919}{.03490} - 2 \times .82904 + 2 \times .03490} =$$

$$\frac{1.55919}{44.676 - 1.685 + .070} = \frac{1.55919}{42.789} = .03643;$$ or,

T′ = 2° 5¼′ = required modulus of curvature. In obtaining the value of the angle D′ by means of (XX.), the necessary sign of the trigonometrical quantities must in like manner be observed; and consequently, Cot. ½D′ = Cot. 62° — 2 × $\frac{\text{Sin } 2°}{1 + \text{Cos. } 56°}$ = .53171 — 2 × $\frac{.03490}{1.55919}$ =

.53171 — 2 × .02239 = .53171 — 04478 = .48693; or ½D′ = 64° 2′; and, D′ = 128° 4′. Hence, D′ — 2nT = 4° 4′, the angle of intersection required.

In computing the modulus of curvature for a long curve, which is required to be laid with precision, it will not be sufficient to obtain a result only true to the nearest *full minute*. For in tracing a curve agreeably to the principles given in Art. 3, it is evident that multiples of the modulus of curvature are required in laying the different chains; and consequently, an error of ¼′ in the modulus of curvature would produce an error of 2′ in the angle of deflection, placing the 8th chain from the instrument. Now, in any common instrument, containing a good vernier scale, an angle of 2′ is quite perceptible. Indeed, if the chains be 100 feet each, an angle of 2′ will be subtended by a line nearly 6 inches long at a distance of 8 chains; and it follows, therefore, that an error of *one fourth part of a minute*, in the modulus of curvature, will, in such a case, produce an error of nearly 6 inches in the position of every 8th station from the instrument. And as the effects of this error will not continue to be only proportionably greater through the whole line, but will accumulate faster and faster, in a geometrical ratio, it is evident that an error of ¼′ in the modulus of curvature is an item of considerable consequence in laying long curves upon a graded surface.

On the Comparative Value and Importance of Mathematical Science, and on the Pretensions of its Professors. [From the London Mechanics' Magazine.]

[Continued from page 632.]

Let us take other views of mathematicians and practical men bending their faculties towards the attainment of the same object. The most valuable method of determining the longitude was at last accomplished through practical means, and by practical men. Euler aimed to produce an achromatic lens as well as Dolland, but it was the latter who succeeded; and their respective modes of proceeding mark both the character and comparative value of their efforts. As to the steam engine, science (other than the most common) cannot lay a particle of claim to it. It is the all-important gift to the world from practical men alone. One was a miner, another was a blacksmith, a third was a glazier, and a fourth a watchmaker. Science has not even now elucidated all its principles,—one important point is as obscure at the present day as ever it was. During the time this mighty engine was maturing, and having for its ultimate effect a political, a moral, and a social revolution throughout the whole earth, the mathematicians of the foreign academies, the Eulers, and the Bernouilles, even when engaged on physico-mathematical subjects, were exciting each other's ingenuity, and eliciting their mutual admiration, by very profound but very sterile inquiries into things selected purposely and merely for the opportunity they afforded for the most abstruse and difficult investigations. Such was that concerning the gyratory motion of a body fastened to an *extensible* thread, first in a horizontal plane, and then, for the sake of the choice piece of complication produced by the introduction of the force of gravity, in a vertical plane, but ending at last with a suspicion that all was wrong. Such was that on the formulæ for determining the motion of a thread perfectly flexible, ending in unmanageable equations. And such was that concerning tractory and compound tractory curves, formed by a weight in one case, and two or more weights in the other, being moved by a thread whose end travels along a line either straight or curved, ending also unsatisfactorily. *Your* Magazine, Mr. Editor, is also the theatre occasionally for the display and sharpening of the wits of certain geometrical correspondents. Such was the tendency of the problem lately proposed and solved—"To inscribe a quadrilateral in a given circle, having given each of the *diagonals* and area." Why should not *these* have their puzzles as well as the more *profound* analysts? They form good school *boy* exercises, and school-boys accordingly have sustained a conspicuous part on your stage. Some persons are particularly apt at such questions, and so are others at solving riddles. The different manner in which the proposal for an undulating in lieu of a level railway has been received by the *mere* mathematicians on the one hand, and by the body of civil engineers on the other, is also abundantly significant of the comparative rank and importance which the former hold in the scale of intellect and utility. Your correspondents, Kinclaven, Iver Maciver, and M. S., are mathematicians—geometricians, at any rate—and they have sided with Mr. Badnall. Be it so—the impress is of their own stamping, and the currency is their own issue.

The limits to which I am confined will permit me merely to allude, and only, to a few more instances of the unfitness of the mere matheinatician for physical inquiries, and of the unsatisfactory applications of their science. At one time the animal economy was mathematically and mechanically explained. The treatises on physiology were filled with problems, long calculations, and algebraic formulæ. Lawrence says, "that one estimated the force of the heart as equal to 180,000 pounds; another reduced it to 8 oz.; and both these conclusions are deduced from reasonings clothed in all the imposing forms of the *exact* sciences."

Even the phenomena of the mind have been forced within the pale of mathematical disquisition. Hartley's elaborate hypothesis of the *vibratory* nature of thought and feeling would afford a choice and subtle theme for analysts of the French school, if only a few facts could be found to give it a coloring of truth, and a plausible pretence for the application of the calculus. We may then hope to find an expression for the velocity of our ideas, with the corrections due to variations in the temperature, moisture, and tension of the medullary fibre!

To come to our own times, there is Sir R. Phillips' theory *of all things*—ingenious enough, but that is all. Then there is Mr. Herepath's mathematico-chemical theory, accompanied with a challenge to the Royal Society, and preposterously backed with an offer to wager £1000 on the issue, in which the molecules of the gases are continually jostling each other and perpetually at loggerheads. The whole scheme is, however, mathematically and demonstrably true, especially if reasoning in a circle be only a circuitous way to truth.* Then there is the more measured movement of the ultimate particles of matter according to the theory of Mr. Emmet, by reason of the altered ratio of the forces which previously held them in equilibrium—the disturbing force being caloric. More recently there is the somewhat similar, but more elaborate and comprehen-

* This conspicuous herald of his own and Mr. Gurney's fame will surely be satisfied if his theory be as true as his assertion, that Mr. Gurney's steam-drag would transfer the same weight as it does on a common road, "*two hundred and sixty* or *two hundred and eighty* miles per hour on a railway, supposing mechanical laws followed, and that the materials and the resistance of the atmosphere would allow it." A slight mistake this—identical with Kinclaven's, of supposing the expenditure of power not to follow the ratio of the velocity as well as the resistance. This is another instance, by-the-by, on the part of both these persons, (for they are one only in error, I imagine,) of mathematical fitness and sagacity for physical inquiries.

sive, atomic theory of Mr. Exley, a work which I approach with the greatest respect, for the many profound, ingenious, and philosophic views with which it abounds; and for the very numerous explanations of phenomena which he adduces in accordance with his hypothesis, and which give it a much less speculative cast than the theories previously mentioned. The laws, however, which govern the immediate action of the atoms, if such there be, are probably not scrutable to our means or faculties; and it must be doubted whether our knowledge, even of the elements of matter, is sufficiently advanced to admit of such mathematical disquisitions: the attempt at present appears to be premature, though possibly it may be ultimately successful; and, in the mean time, the experimental researches of philosophers, with Mr. Faraday at their head, will be more useful, and teem with results of greater consequence. What an important though simple fact has lately been brought to light by this gentleman, and how much of a practical character there is about it, that the chemical action of platina in certain cases depends on its being perfectly *clean*,—a circumstance which your very profound thinker, with his algebraic formulæ, would run every chance of overlooking, because it is just on the surface of things. The sagacious practitioner having his attention alive to every incident, attaches no undue importance to what is recondite, or undervalues any thing because it has not the air of being scientific or *recherche*.

I have thus endeavored to mark the peculiar deficiencies for just reasoning and original investigation, to which the mere mathematician is liable from the biassing tendency of his studies, the natural bent of his mind, and the engrossing occupation of his time. I have illustrated this position with as many instances as my limits will allow, and I have incidentally shadowed forth the true and philosophic mode of conducting inquiries into the mixed and complex affairs which surround us on every hand. In pursuing this subject, there are one or two points on which I wish to guard against misapprehension. It is not intended, then, to impugn any of the methods adopted by the mathematicians in their own science, as purely considered, however they may have differed among themselves respecting them. Still less is it intended to impugn the modes of procedure adopted in the mixed mathematics, or to complain of what has been *fitly* done herein; but rather of what has not been so done—of premature applications of the science before the phenomena of nature have been sufficiently investigated to warrant an hypothesis—of inadequate applications, from a too great sacrifice of physical considerations in deference to the exactness of science—of partial applications being assumed to be complete, or, at any rate, to be of greater pretension and value than avowedly irregular but more comprehensive modes of considering the subject,—and of such applications being put forward in lieu of, and in preference to, tentative proceedings, even when the case points to and admits of their being adopted. Neither is it intended that those observations, or mere hints, rather, concerning the true and more ample mode of philosophising, should point to the analytic more than to the synthetic method, for they refer to both; and the reference is also as much to the secret mental process as to the published and formal procedures. The former is a curious subject, of which scarcely any thing can be known, and the little we can conjecture of it must arise from a knowledge of what passes in our own minds. How intensely interesting would it be to have before us the workings of such a mind as Newton's, whilst maturing his immortal system. We have a glimpse of such things in what is told of Kepler—of his shrewd guesses, tentative methods, and ultimate success in discovering by these means the two laws of the planetary motions which bear his name; and also in what is related of the cut and weighed paper proceedings of some of the geometricians. The results, of course, appeared in systematic mood and scientific dress. The works of Newton gave evidence of certain secret and facile means, before the method of fluxions was announced or known. We have also, in the detail of the experiments which led Sir Humphry Davy to the discovery of the miners' safety lamp, an interesting instance of this mental process, at least of the general course of his thoughts. We are not to imagine that the analysis or synthesis, as brought forth to public view, is in its mental elaboration a direct and straightforward affair. Doubtless there are alternated or mingled methods of resolution and composition, of experiment, tentation, and verification, in a round of mixed proceedings; but from this seeming chaos of thought the plastic spirit of true philosophy evolves coherent forms of symmetry, of truth, and beauty. The heart of man is a secret thing; but the mind of man is yet more impenetrable. I would also wish to be understood as not contemning mathematical acquirements in the slightest degree, but as pleading for their use in opposition to their abuse, and as moderating only the overweening pretensions of their value and importance, both in an intellectual and useful point of view, in which the *mere* mathematician is apt to indulge.

It may be expected from me that I should apologise for assuming the censor in such sort. I beg, then, in justification and corroboration of my opinions, to quote the following sentiments, which have come under my notice since the preceding observations were written—in fact, the treatise in which they appear is just published: "In mathematics we go smoothly on, neither turning to the right hand nor to the left; there is, in fact, no alternative presented to the mind—we cannot do otherwise than give our assent to what is before us. There is no weighing, no balancing of collateral evidence, or consideration of circumstances, such as often clog and impede our progress in many of the other branches of knowledge. How often do we hear mathematicians bewail the difficulties they meet with when they wander from their own folds; and how often do we hear them give utterance to the pleasing but forlorn hope of seeing all knowledge reduced to mathematical certainty and precision?"—"If we examine mathematics in an intellectual point of view, there appears to be something of a mechanical turn in the acquisition of its truths; and it is by no means evident, that to excel in mathematical investigation, the more lofty and elevated of our mental powers are required to be brought into exercise. There is a fact, besides, established by the history of philosophy in all ages and countries, which pointedly bears out this opinion, namely, that we have daily instances of persons making themselves proficients in mathematical science at a very early age; but we never find that a person becomes eminent in mental, moral, or political philosophy, till more advanced in life. This is a fact founded upon the natural course of the human mind, and clearly teaches us, that higher qualities of intellect are required to reason upon and comprehend questions on topics relating to human affairs, than are necessary in the solution of problems connected with the pure sciences."—[Blakey's System of Logic. 1834.]

There is another very important topic connected with this subject, which is, the hurtful influence which mathematical studies, or rather, which a taste for the abstract mathematical method, has had on general reasoning, and on the tone and manner in which investigations into things in general have been conducted—a taste, which, taking its origin in the mathematical predilections which succeed the downfall of the old scholastic methods, has, from the ease and convenience which it affords, for taking determinate but narrow and contracted views of things, and the flattering but fallacious assurances it fosters of clearness, decision, and certainty, infected the universal mind, and marred the philosophy of the age. The length of this article, already too extended for a single communication, precludes me from appending my observations on this topic; but they may, probably, form the subject of another letter, if you are of opinion, Mr. Editor, that such matters are not foreign to the scope and objects embraced by your highly useful and valuable miscellany.

I am, sir, yours, &c.

BENJ. CHEVERTON.

MODE OF PURIFYING PALM OIL.—*To purify Palm Oil, and to whiten it comparatively for making soap.* Take two parts of quick lime and three parts of the muriate of ammonia, the lime having been previously slacked with half its weight of water, and allowed to cool and reduced to a fine powder, and the muriate of ammonia having also been reduced to a fine powder, and then intimately blended with the powdered lime. The mixture is to be put into a still, or cast iron pan, having a close cover to it, and a tube leading from the head of the pan, or still, to near the bottom of the soap copper, which should contain equal quantities of water and palm oil. On fire being applied to the still, the ammoniacal gas will pass over into the soap copper; and as the water and oil combine, continue adding boiling water to the extent of treble the weight of palm oil in all. By this process the color of the palm oil will be almost instantaneously changed to a pale yellow. The boiling palm oil and water should, of course, be kept rapidly stirring while the gas is passing through. The ammonia, being an alkali, adds to the strength and detergency of the soap, while the peculiar smell imparted by it is so weak as scarcely to be susceptible after a few days' exposure to the atmosphere. —[London Mech. Mag.]

M. DUPIN has been so well pleased with his reception in England, that one of his colleagues, the Duke de Broglio, is about to follow his example, by paying his respects to the Lord Chancellor. Forthwith, of course, he will be taken to the Mechanics' Institution, and made an honorary member. The distinction will not, however, be so appropriately conferred as it was on M. Dupin, whose brother, Baron Chas. Dupin, is well known as the introducer of similar institutions into France.—[Ib.]

The Art of Wine Making—the Gervais Fermenting Apparatus Improved.

[From the London Mechanics' Magazine.]

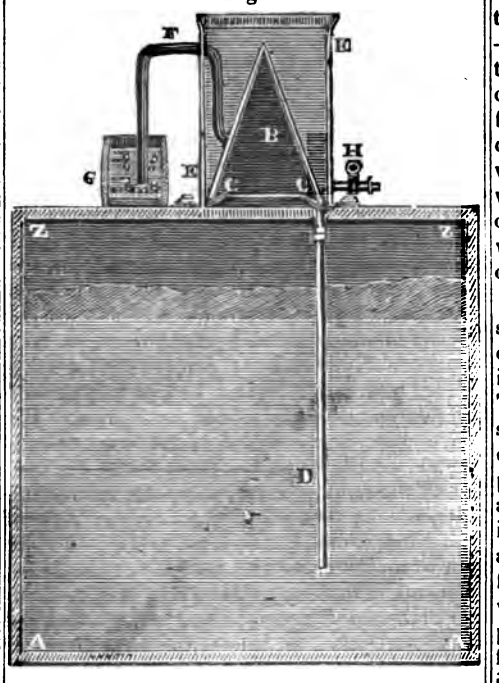
Mr. Booth, whose treatise on the Art of Brewing we lately noticed,* has just produced another treatise on the kindred "Art of Wine-making;"† or, to speak more properly, a volume supplementary to the former. The general principles, and many of the manipulations, of the two arts are so similar, that the business of this new treatise consists mainly in pointing out those peculiarities by which the manufacture of wine differs from that of beer; and the two treatises are so intimately connected, that the one cannot be profitably perused without constant reference to the other. As Mr. Booth himself observes, "the four parts of the Art of Brewing and these two of Wine-making, with the Appendix on Cider and Perry, may be considered as one continued work, embracing a general system for the manufacture of vinous liquors."

Mr. Booth in his present work treats first of "Wine-making in Warm Countries," and next of "Wine-making in Cold Countries;" or in other words, of foreign and home-made wines in all their numerous varieties. He gives, under both these heads, a great deal of very useful (though not often very novel) information, derived from the most authentic sources, and interspersed with much shrewd observation and judicious advice. One of his best chapters relates to the much contested point, whether open or close tuns are best suited to the process of fermentation? The ancient practice of the wine provinces of France was to leave the tuns open, or, at least, to cover them very slightly; but at the beginning of the present century, a Mademoiselle Gervais introduced a close fermenting apparatus, (afterwards patented in Great Britain by Messrs. Deurbrouck and Nichols,) which having the good luck to be patronised by the celebrated Chaptal, has become all the fashion among our French neighbors. According to the partisans of this new method, it serves not only "to condense, and to return into the fermenting fluid, all the aqueous, spirituous, and balsamic vapors which are usually carried off with the carbonic acid gas, and thereby to enrich the wine, by preserving entire its spirit and perfume," but actually augments the quantity of wine obtained, by from 9 to 15 per cent. Mr. Booth does not altogether dispute these conclusions, but he insists that they are prodigiously exaggerated. He maintains that the increase of volume is "not above one in two hundred;" that "this increase is caused by the condensation of all the gas that is evolved during the whole progress of the fermentation;" and that the proportion of this condensation, which is spirituous, is probably "very small."

We shall leave Mr. Booth, however, to speak for himself. He commences very properly by describing what the Gervais apparatus is, and how it has been proposed by M. Dubrunfaut to free it of its more striking defects.

"Z Z, A A, (see fig. 1,) is the perpendicular and central section of a fermenting-tun, with the apparatus affixed to the close head Z Z.

Fig. 1.



"B is a cone of tinned iron plate, communicating at bottom with the tun, by means of a hole in the cover Z Z.

"C C is a small channel extending round the interior base of the cone, being adapted to receive the condensed '*alcohol* and *essential oils*;' from whence they are conducted, down the small pipe D, into the lower part of the liquor in the vat.

"E E is a cylinder of the same material as the cone which it surrounds, and containing cold water, for the purpose of condensing the vapors which rise into the cone during the fermentation

"F is an egress pipe, communicating with the interior of the cone, its extremity being immersed to the depth of six inches, at least, below the surface of the water in the small tub G, from whence the incondensable gases are permitted to escape into the atmosphere.

"H is a cock to draw off the water from the reservoir E E, when it becomes warm, and requires to be replaced with cold water, as is the case in high fermentations.

"It is asserted by the French chemists, and conceded by Messrs. Deurbrouck and Nichols, the English patentees, that the vinous fermentation will not commence without the access of atmospheric air or of oxygen; but after it has once begun, the further exposure to the air is unnecessary; and the quantity contained in the empty space (left in the tun to prevent the head from rising into the cone) is, they say, perfectly sufficient to originate the fermentation: but, they add, 'as soon as carbonic acid is evolved from the fermenting gyle, the atmospheric air, being lighter, is driven out from the upper part of the working tun; and as no air is permitted to enter afterwards, all the subsequent carbonic acid gas emitted diminishes the quantity of oxygen contained in the gyle, by the oxygen uniting with the carbon as fast as it disunites from the saccharine matter during its decomposition, and thereby secures a soundness and peculiar mildness not to be produced by any other mode.'

"Never having seen the effects of fermentation in tuns, thus, as it were, hermetically sealed, we cannot personally join in their praise; but we apprehend that there is one inherent defect which will always prevent their general adoption in the British brewery—we mean the tardiness of the progress of the fermentation. From fifteen to twenty days, which it is granted would be requisite for the fermentation of table beer, is a sufficient bar to its adoption. On this principle, we suppose that the Scotch ale brewers, who, even with open tuns, often take three or four weeks to a gyle, would require the whole of their brewing season for a single operation.

"It will be observed in the preceding description of the Gervais apparatus, that the extremity of the *egress pipe* F is immersed in water *to the depth of six inches at least.* These six inches impose an additional pressure upon the surface of the fermenting fluid, equivalent, at an average, to the sixty-fourth part of the whole weight of the atmosphere; and, in consequence, has a material effect in preventing the escape of the carbonic acid, thereby retarding the attenuation. 'In fact,' says M. Dubrunfaut, 'the gas, meeting with a powerful obstacle, which opposes its passage through this condensing apparatus, forces its way by other issues, which it finds in the pores of the wood, and the fissures of the lutes which are recommended to close the joints of the cover of the tun. The portion of the gas which thus escapes, by openings that can never be kept closed under such a pressure, subtracts the alcoholic vapors from the refrigerator, and is a fundamental error in the construction of the Gervais apparatus.' We may add, that had it even been perfect, it was not new: it was nothing more than a combination of two principles which had been long known—the condenser of Jean Baptiste Porto, a Neapolitan, which was described in a work on Distillation, published by him in 1609; and the hydraulic valve of M. D. Casbois, which was announced in a French Journal of Sciences and the Arts in 1783.

"It will naturally be asked, in this place, whether or not the rise in the barometer, to the extent of about half an inch, would not have the same effect on the vinous fermentation as the Gervais apparatus? We say that it would have more: for, in the case of an increased weight of the atmosphere, the pressure all around the tun would be equal to that upon the surface of the liquid. One marked difference would be, that there would be no exit through the pores or chinks of the tun; for these fissures would be equally pressed upon by the external atmosphere. We have been long aware that the variations of the barometer are indicative of alterations in fermentative processes of every kind; and we doubt not that a time will arrive when that instrument will be considered as a necessary appendage to the other instruments which are now consulted by the manufacturers of vinous liquors. Persons who have not attended to this particular subject, (and there are few who have,) can have no conception of the effects of atmospherical variations. Wine-making is confined to a certain season, and to countries where the variation of the barometer is comparatively small; it is in the regions of the north that those effects are more particularly worthy of observation. On this subject we have made many experiments; but what might be useful as suggestions to a scientific manufacturer, would be here out of place. As long as the mind remains doubtful of the facts,

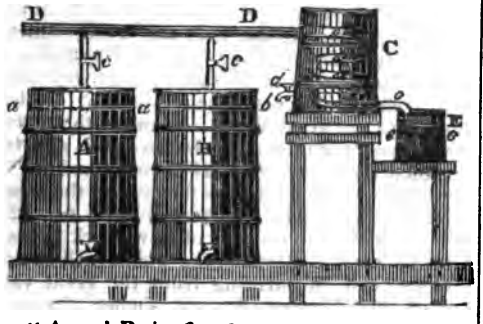
* See page 454, of this work.

† The Art of Wine-making in all its branches. By David Booth. To which is added an Appendix concerning Cider and Perry. London: F. J. Mason. 123 pp. 8vo.

they ought not to be given to the world as *knowledge*.

"The author last quoted has proposed a mode of close fermentation, which is free from the errors and absurdities that attach to that of Mademoiselle Gervais; and as it may be useful in the vinous fermentations of this country, and does not interfere with the English patent above mentioned, we take this opportunity of publishing a brief description of the process:

Fig. 2.



"A and B, in fig. 2, represent two of any number of fermenting tuns, which may be arranged and combined on the same principle. They are here re-printed as of the same size, and as placed on the same horizontal level; but these circumstances, though convenient, are not necessary. The lines *a a* and *b b* mark the surface of the *must*, or other fermentable liquid.

"D D is a pipe, communicating with each tun by means of branches, which are inserted through the close head, and which may be stopped at any time, by means of the stop-cocks *c c*.

"C is a cask or other vessel, filled with cold water, through which the pipe D D is continued in the form of a worm, *o o o o o*: this water may be drawn off when too warm by means of the cock *d*, when this refrigerator can be re-filled with cold water, through an opening in the head.

"E is a smaller vessel or tub, destined to receive the product of the condensation of the vapors arising from any or all of the fermenting tuns. Those vapors rising in the branch pipes *c c*, into the main D D, pass through the worm *o o o o o*, which is bent, when it leaves the refrigerator, into the tub E, reaching half-way to its bottom.

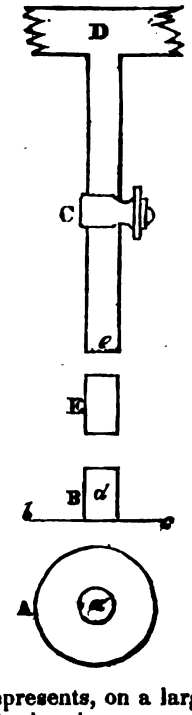
"It will be obvious, from this arrangement, that the condensable vapors which arise with the carbonic acid gas, will, by passing through the refrigerator, be collected at the bottom of the tub E in a fluid form, while the upper part of the tub will be filled with gas. Care must be taken to draw off portions of this fluid from time to time, (by means of a cock in the bottom of the tub, which is not here represented,) so that it may never rise above the level of the orifice of the worm; for were the fluid, for example, to rise to the level *e e*, it would, according to its gravity, form an hydraulic valve, which would cause an additional pressure upon the surface of the fermenting liquid, the prominent objection to the Gervais apparatus.

"On this plan, the complex apparatus for each tun is rendered unnecessary; for a single one of sufficient size will serve for any number of working tuns. The condensed liquid is not hereby returned to cool the fermenting mass; and the distiller, for whom we should suppose the practice well adapted, might carry the liquid from the tub E directly to the still. It may, however, be returned into the mass by a long-stalked funnel, if desired. The worm gives a free passage to the vapors; since its lower extremity, being plunged only in carbonic acid gas, cannot be said to offer any obstruction. The liquid in the tun is then fermented solely under the simple pressure of the atmosphere; and the carbonic acid gas, finding an easy escape through the opening of the worm, no longer seeks to force a passage through the pores of the wood or the chinks of the tun.

"The gas, which, on account of its density, constantly fills the tub E, prevents all risk of absorption of atmospheric air as completely as is done by the hydrostatic valve of Gervais. When there is a range of tuns, one or more will be continually discharging carbonic acid gas; but where there is only a single tun, and that not in full operation, the accession of air could be equally well prevented, for it would only be necessary to fill the tub with water until the surface should rise two or three-tenths of an inch above the lower extremity of the worm, as shown by the line *e e*.

"When we want at any time to look at the state of a tun, we have only to shut the cock *c* (which shuts out all communication with the others), and, opening a plug-hole in the head, draw off what we require by means of the cock at the bottom. In the same manner we may charge and discharge the several tuns successively, without their interfering with one another. Each may be washed out by having a *man-hole* in the upper end; or it may even be taken away and re-placed by another, without retarding the operations of its neighbors. For the more easy performance of this latter purpose, M. Dubrunfaut recommends the following disposition of certain parts in the construction of the apparatus:

Fig. 3.



"Fig. 3 represents, on a larger scale than that of fig. 2, the pieces necessary for the purpose above mentioned.

"B is a tube and flange, seen sideways, of which A is the face, being a circular plate of the diameter of its section *b c*. This piece is fixed by nailing the disc *b c* upon the head of the tun, in such a manner that the opening *a* corresponds with the hole which is made in the head of the tun, for the purpose of allowing the escape of the gas: the tube *d*, of which *a* is an extremity, being of the same diameter as the hole.

"The tube *d*, which is thus perpendicular to the head of the tun, is of the same diameter as the tube *e* of the piece C; and these two tubes, when the apparatus is finished, will be united at their orifices so as to form a single continued pipe. In order to close completely any little openings between their orifices, the cylinder E, the diameter of which is a little larger than that of the tubes *d* and *e*, is drawn over the junction, and its extremities are luted to those tubes so as to prevent all access of air or escape of gas. The piece C is previously united to the larger tube D, which here represents a part of D D, fig. 2. From this disposition of the parts, it is easy to see, that by shutting the cock of the piece C, and pushing upwards the moveable socket E, the tun may be completely disengaged, without affecting any other part of the general arrangement.

"We have dwelt the longer on this subject because of its probable adoption by the distiller and vinegar maker, for whom we should suppose the close fermentation to be better adapted than to the brewer, or even to the foreign wine-maker. The produce will be found to be very various, according to the heat of the fermentation and the quality of the fermenting fluid. At an average, perhaps, it may be estimated at about the two-hundredth part of the quantity of liquid that is fermented; and in quality, chiefly water mixed with a small portion of alcohol, or rather of the immediate materials of alcohol."—pp. 16–23.

On the adulteration of foreign wines, we have the following acute remarks:

"To the inhabitants of this country it is of much less importance to know how any particular species of foreign wine is manufactured, than to learn how to guard themselves from the effects of its adulteration. The following observations may, perhaps, account for an occasional accident, and at the same time may serve as a caution to the bottlers of wine in this country.

"We have already mentioned, that the bottled wines of the Continent (particularly champagne) undergo at least one or two *decantings* or *rackings* in the bottles before they are exported. A *bin* of wine is tried, to see whether or not it is fit for the foreign market. The practice is (especially in the wine of which we speak) to use very fine, that is, elastic corks; to push them half into the bottle; and to press the upper part over the neck, in a sort of girth or rim, which is kept down by means of twisted wire. This cover of the top of the bottle is re-covered with wax of a certain color, and what that color is depends on the substances with which the wax is mixed. If it be yellow, the coloring matter is orpiment; if it be green, the color is usually given by a mixture of orpiment and Prussian blue. Both these coloring matters are poisonous; for orpiment is sulphuret of arsenic, and Prussian blue is formed from one of the most instantaneous poisons —the prussic, or, as it is now termed, hydrocyanic acid.

"Let us suppose, then, that a bin of champagne is intended to be exported, or, if in a

British cellar, to be sent to a customer. A bottle is drawn for trial, and is found to be deficient in effervescence. This can be remedied by inducing a new fermentation; and we know that it is the practice to accelerate this desirable quality by means of the introduction of a syrup of sugar candy, mixed and purified with cream of tartar. This addition, which is put into the bottle in proportion to the taste of the customer, is certainly not deleterious. But the cork is drawn, the seal is broken, and a part, perhaps a few chips of the wax, is rubbed off, and enters into the bottle. If the color has been either green or yellow, arsenic also enters; and, unfortunately, the world is but too well acquainted with the consequences. We may also add, that in French cellars the wax has another object in view besides (what is generally thought) the exclusion of the atmospheric air. In that country there are numerous swarms of insects, who are ready to devour the corks, and penetrate to the liquid. As far as regards these insects, the poisonous quality of the coloring matter is not to be regretted."—p. 52.

A danger of a less formidable nature to be guarded against, is the substitution of certain home-made imitations for the genuine products of the continental vineyards:

"Of all the vinous liquids which are manufactured in this country, beer and ale, cider and perry, (and mead and mum, when not banished by excise regulations,) are the only kinds that can be called national. The juices of most of our native fruits possess too little *saccharum* to be fermented pure; and when malt wort, or honey, was formerly added, as sugar has been in late times, the compound was also flavored and colored with extraneous substances, so as to imitate one or other of the favorite wines of the Continent. This was more particularly attended to when the making of 'sweets,' or 'British wines,' became a trade. The imitation of foreign wines originated in fraud, and excise duties raised the imitators to the rank of authorised manufacturers. As long as these gentlemen were contented with the ordinary names of currant wine, gooseberry wine, &c. all was well; but we now see champagne, sherry, port, &c. in the bills of the British wine makers, and we have little doubt that some of these compounds occasionally find their way into the cellars of the 'dealers in foreign wines.' Champagne, in particular, is a very high priced article; and the British champagne, made from gooseberries, if properly made, and drunk when young, may impose upon three-fourths of the purchasers. Perry, also, particularly in mixture, is passed off for champagne, and is, perhaps, not much inferior to the real wine which it imitates. It is not so much the inferiority as *the lie*, which passes a cheaply made article for one that is more expensive, that constitutes the quackery and the crime of those ingenious imitators. If we can make a British wine equal to champagne, we have a right to do so; but we have no right to pass it off *in trade* as a foreign wine."—pp. 61, 62.

In the "Appendix concerning Cider and Perry," Mr. Booth represents the English manufacture of both these liquids to be in a very declining state. His observations on the subject are well deserving of attention:

"We have reason to believe that the superior sorts of perry, as well as of cider, though they may have the same names, are not equal to what were sold for such forty or fifty years ago. Most of the trees that were famed for the excellence of their produce are either dying or dead. Mr. Marshall published his Rural Economy of Gloucestershire in 1789, at which period he laments the decay of the finest fruit trees. 'All the old fruits,' he says, 'which raised the fame of the liquors of this county (Herefordshire,) are now lost, or so far on the decline as to be deemed irrecoverable. The *red streak* is given up; the celebrated *stire apple* is going off; and the *squash pear*, which has probably furnished this country with more *champagne* than was ever imported into it, can no longer be got to flourish; the stocks canker and are unproductive.' The squash pear is described as remarkable for the tenderness of its flesh, which bursts, (or rather burst*ed*,) if allowed to fall ripe from the tree; and hence the name.'—pp. 119, 120.

The pity is the greater, that our British perry is (or rather was) a species of wine particularly worthy of cultivation:

"Perry, when the manufacture has been successful, is much more similar than cider to the sweet wines of the grape. Without any mixture it has often been taken for the best quality of effervescing champagne. The juice, mixed with an equal quantity of a purified syrup of sugar or of honey, of about 25 lbs. gravity, (being allowed to finish its fermentation, so as to be bright before bottling,) is scarcely to be distinguished from a foreign wine of a superior species."—p. 121.

Iron Boat on a New Principle.—Mr. David Napier, engineer, has fitted up an iron boat on a new principle, to sail on the Clyde. A large portion of the boat below the water line is formed into a condenser, and the water outside keeps it cool, so that little (if any) injection water is required. In this plan, the water pumped into the boiler will not be so salt as if more water were let into the condenser; and an air pump a little smaller than ordinary will work the engine.—[James Whitelaw, Glasgow, June 25.]

New Locomotive Engine.—A new locomotive engine, from the foundry of Messrs. Geo. Forrest & Co., was tried on Monday on the railway. It made the journey from Liverpool to Manchester in 67 minutes, and brought back the first class train in 77 minutes. This powerful and rapid engine is intended for the Dublin and Kingstown Railway.—[Liverpool Chronicle, July 28.]

Trade on the Canals.—During the week ending on the 28th of September, the following, among other property, passed Utica east on the Erie Canal, viz.:

54,229	barrels of	flour.
823	"	ashes.
172	"	provisions.
57,937	bushels of	wheat.
25,517	"	coarse grain.
33,914	gallons	domestic spirits.
1,111,590	feet of	lumber.
18,126	"	timber.
361,700	staves.	

Amount of tolls on clearances passing and issued at Utica, for the same period, $37,788.62.

Railroad.—We learn that the Paterson Railroad received in August $4,500, and in September 4,589. In September, the receipts were, for freight, $2,000, and for passengers, $2500. In August, for freight, $1400, and passengers, $3,000.

Railroad in Virginia.

Orange C. H., Va. October, 1834.

To the Editor of the Railroad Journal:

Dear Sir,—I have noticed in the Virginia Herald a project for a railroad from Fredericksburg, or the Great Bend of the Potomac, to the Virginia Springs, through the Blue Ridge, &c. I look upon this scheme as both practicable and grand, as far as it goes. But one has only to open his eyes upon your new Railroad Map, which should be in the hands of every friend to internal improvement, in order to be convinced that if this railroad is continued on from the Virginia Springs to the ever navigable waters on the Great Bend of the Ohio at Guyandot, it at once opens the most superb highway that can possibly be constructed in the United States, to the great West. It unites the great South-west with the Atlantic in a much shorter distance than the great Erie canal; and when completed, will enable the farmers of the west to carry their corn, which now sells for 12½ cents a bushel, to the city of New-York in less than 48 hours. Besides, the public will be accommodated in carrying from the great valley of the Mississippi, and thence through Fredericksburg and Washington, Baltimore and Philadelphia, to your city, in a comparatively short period; whereas, to my knowledge, hundreds, if not thousands, have during the past season waited at Guyandot, day after day, for want of conveyance to the White Sulphur and the northern cities. All the travel from the South-west to Washington city, during the session of Congress, will of course fall into this track, the route being nearer and quicker than any other. The inhabitants of Kanawha are now ready to do much for the construction of this road, in order to give free transport to the millions of bushels of salt now manufactured annually at their works. A few days ago I saw a merchant from near the salt works on his way to Philadelphia and New-York to buy goods, which he said he should send home by way of Pittsburg or Wheeling, and that he must wait for rains, because the Ohio was quite too low at this time, and at the best it required four weeks at least. Were the railroad of which we have been speaking completed, it would require no more than 44 or 45 hours to transport the same goods from New-York. If I had time I might mention other advantages, but I only wish to call the attention of the public to this route, and I am sure that they will at once see those advantages, and save me the trouble of mentioning them. I am glad to learn that wood for railroads can now be made durable, as it will greatly lessen the expense of excavations and embankments. In the route above mentioned, there are but few streams to cross, and the gaps through the mountains render it comparatively a level grade. I remain, dear Sir, very respectfully, yours,

J. McAdam, Jr.

Steam Communication with India.—The House of Commons' Committee on Steam Communication with India have reported to the House that, in their opinion, the route by the Euphrates and the Persian Gulf is superior to every other proposed, for its "physical, commercial, and political advantages," and they recommend that a grant of £20,000, should be made by Parliament to defray the expense of giving it a fair trial. The distance from Bir, in the Persian Gulf, where this line would commence, to Scanderoon, in the Mediterranean, is stated to be much less than that between Suez and Alexandria. The Committee do not appear to have inquired at all into the merits of the route by the Cape of Good Hope. We are surprised at this, for whatever may be said in favor of either of the Mediterranean routes, as affording a quick, though not always sure, conveyance for letters, we think it is demonstrable that for goods, passengers and troops, the line by the Cape is that on which steam may be employed with the greatest advantage.

We alluded some time ago to a pamphlet, by the Messrs. Seward, C. E., in which this view of the subject is very ably advocated, and shall take an early opportunity of bringing it again more particularly under the attention of our readers.—[Lond. Mech. Mag.]

[*From the Journal of Commerce.*]

U. S. District Court.—Judge Betts presiding.

William Falconer vs Edward Clark. Scire Facias to repeal a Patent.

This patent was for an improvement in the manufacture of white lead and other metallic salts. The patent of the defendant was thus set forth; viz:—"I rest my claim to invention on the introduction or admittance of atmospheric air, air containing oxygen, with the other agents or materials named, that is, the vapor of vinegar and carbonic acid generated by the combustion of fuel, or disengaged from chalk or carbonate of lime, either pure, or mixed with such irrelative matter as will not interfere with the process, or by whatever means or apparatus their introduction or admittance may be effected, into cisterns or apartments, appropriately supplied with metal lead, or with the metal to be acted upon."

The plaintiff insisted that this was in principle and effect the process of Montgolfier and Noble, and called John Steele, professor of chemistry, who said he had lectured in Scotland and in New York before the Mechanic's society, and had long devoted himself to the sciences as applied to the arts.

Into his Common Place Book of 1817, from some work of science at Glasgow, he copied Montgolfier's process, which was thus; viz:—He constructed a reverbatory furnace, in which was placed burning charcoal; the air that passed in was partly turned into carbonic acid gas, and partly passed the furnace undecomposed into a barrel, partly filled with vinegar, and created a vapor of it, which by a tube communicated with a rectangular case, in which was suspended sheets of lead, and into this case passed the vapor of vinegar, carbonic acid gas, and the oxygen not destroyed in passing the furnace. The case had an aperture to pass off the redundant gas. This was a spontaneous in roduction of oxygen, carbonic acid gas, and vapour of vinegar, into a cistern filled with sheets of lead, to convert them into white or carbonate of lead. See Tenard's Chemistry, and Annals de Chimie and Orfilo. Noble's patent used, in a different way, the the true agents to operate on shets of the metal. See a pecification in Repertory of Arts, vol. 13.

He says Clark's process is the same in principle and effect. The elemental materials the same, and they produce the same effect. From his knowledge of Chemistry, no doubt Montgolfier's plan would succeed—never knew it put in operation—heard of it once in use at Glasgow, and abandoned. Orfila Vol. 1, 1828, is read as follows, viz:—"Before knowing this process (Litharge) they made White Lead by submitting sheets of the metal to the action of vapor of vinegar, air and carbonic acid. The Lead oxydated and passed to a state of sub-acetate, which was then recomposed by the carbonic acid. This process, less advantageous than the first, is not yet altogether abandoned."

Plaintiff rests. Defendant calls Professor *Latham W. Gray*, who says that he has ascertained that oxygen is taken out of air that passes through the fire.—Presumes if air is a necessary agent, White Lead cannot be made by Montgolfier's process. In Clark's works at Saugerties, the same air goes through the furnace as in the process of Montgolfier, with an additional quantity at Clark's forced in. The great advantage of Clark's method is the forcing in atmospheric air.

Cross-examined.—Says Chemists don't pretend to fix the quantities of the agents. If Montgolfier's plan admitted sufficient air to go through the furnace, it would make White Lead. The difference between Clark and Montgolfier is—Clark has an apparatus to force in air. From Montgolfier's process, I think he intended a sufficient quantity of oxygen should pass the furnace to produce the desired effect; and of his three agents, oxygen was one. In Orfila's treatise I should, as a Chemist, know the agents must be confined, to operate.

James W. Macneven, for Plaintiff, says—He has long been Professor of Chemistry in the New-York State Medical College. I have concluded from Works of Science, Montgolfier's process has been put in practice; but I know not the fact. Atmospheric air there is not all decomposed in passing over the charcoal. I may say I am satisfied Montgolfier's plan was used in France. In it, there is a spontaneous supply of oxygen and carbonic acid gas.

William H. Elliott, M. D. has lectured on Chemistry, has known Montgolfier's system for many years. Oxygen is a part of it—thinks it would succeed.

Defendant calls *Michael Casey*, workman. Proves that Ripley at Saugerties draws his carbonic acid gas and oxygen over and through a furnace. The air was drawn in;—corrosion in 10 or 12 days.—The plan of Clark is a good one, and makes good Lead.

George S. Howland, for Plaintiff, says, he is connected with the Brooklyn Works. The plan of Litharge is used in France, and patronized by government; yet there are other plans. Generally in England and America the old pot method is preferred. It takes from 30 days to 3 months; and the longer the better, for a corrosion. We experimented on a plan like Clark's, and abandoned it.

William Cumberland, for Plaintiff. Atmospheric air or oxygen is considered a necessary agent. I never used it as a distinct one. I experimented and obtained a corrosion daily.

James Renwick, for Defendants, Professor in Columbia College, says he never heard or knew that Montgolfier's plan went into use.

Plaintiff insisted,—

That the same elemental meterials to produce the same effect, having been known and used before the patent, that therefore, Clark was not the inventor, and his patent void.—

That whether the same plan was used or not, it was sufficient that it was well known and could have been put into successful operation, as was proved by Professor McNeven, Eliot and Steele.

The patentee was in law presumed to know all matters described in books of sience, and no ignorance in fact could excuse him.

It was proved that excellent white lead was made by Clark's patent.

The defendant insisted that a merè description of the mode, if not proved to have been put in use, would not repeal the patent.

The Judge delivered a very lucid ond learned charge to the Jury.—He stated that they were to read the specification of the patentee, and from his summary, ascertain what he clamed as his invention. If this had been before published in works of art and science, the patentee was presumed to know it—If they found that the invention claimed had been known before and described in authors upon the subject, although it might never have been used, the patent was void. But if they found the invention claimed, a new one, and the patentee the true inventor, the patent was valid.

The Jury found for the Complainants, on the ground that the defendant was not the true inventor, and also further found that the patent was not obtained surreptitiously, or upon false suggestions.—Mr. Clarke has appealed.

For Complainants, C. Walker.

For defendants, Staples, D. P. Hall and Patten.

The French Treaty.—The Globe of Monday, gives the following abstract of the chief incidents connected with the forming of this treaty:—

The Convention was signed at Paris on the 4th of July, 1831; the ratifications were exchanged on the 2d of February, 1832, at Washington.

The French Chambers were in session to the 21st of April. The exchange of ratifications must have been known in Paris prior to the close of the session! The subject of the treaty was not presented.

The Chambers met again on the 19th of November, 1832. The session closed on the 25th of April, 1833. On the 6th of April, the Minister of Finance laid before the Chamber of Deputies the treaty with the United States, and a bill making the appropriations to execute it. The bill was read and referred to a committee. No action upon the subject during that session, which closed on the 25th April, 1833.

The next session opened the following day, 26th April, 1833. On the 11th June, the Minister of Finance presented a new bill. It was read and referred. Some incidental discussion took place on the 13th June, but nothing important was done.—The session closed on the 26th of the same month, no further notice being taken of the bill.

The next session began on the 23d December, 1833. On the 13th of January, 1834, the Minister of Finance again presented the bill. It was received, ordered to be printed, and referred to a committee. On the 10th of March, Mr. Jay presented, from the committee, a detailed report, recommending the adoption of the bill. The discussion commenced on the 28th of March. The bill was opposed—by a few of the speakers, because France should not have agreed to pay any thing to the United States; by others, because the administration had contracted to pay too much. The debate continued three days, and on the 1st of April, the Chamber voted—344 members being present.

The votes in favor of the bill were	168
Against it	176
Majority against it	8

The competent authority having refused the appropriations requisite, the United States would have taken it for granted the decision was final, and the President would necessarily have called upon Congress to decide upon the measures to be pursued.—To avert this consequence, the King of France sent a national vessel to his representative in this country. The vessel arrived before Congress adjourned, and the President made no communication to Congress. The People will understand that the assurances given to him by the Executive of France must have been full and satisfactory as to the intentions of the King, and his expectations of seeing soon redeemed by the new Deputies the faith of the Government which had been disregarded by those whose term of service had just expired. The French Chambers ordinarily meet in December. The King has the constitutional power to convoke them, and they do not assemble until called. If he does not assemble them unusually early, the question will stand as it now stands, at the meeting of Congress, and the final decision of the French Chambers will not be known here, until near the close of the session of Congress; that is, a few days before the 4th of March next.

It is greatly to be desired that the Chambers should assemble before the meeting of Congress, and that the decision of France should be communicated some time before the 4th of March, otherwise, provisional legislation, at all times to be resorted to with regret, may be found necessary to the character of the United States and the just claims of their citizens.

The President of Columbia College has been directed by the Board of Trustees to return their thanks to John Bowring, Esq. LL. D., of London, for his present to the Library of the College of the works of the late Jeremy Bentham, and also to Col. C. W. Pasley, C. B., F. R. S., of the Royal Engineers, for a similar donation of his "Obeservations on the Standards of Measures, Weights and Money;" which acknowledgments have accordingly been communicated to those gentlemen respectively.

The President has also received from the Most Rev. The Arch Bishop of Dublin copies of various tracts and pamphlets published by his Grace within the last few years, and transmitted by him for the Library of the College; and from Henry Beaufoy, Esq. of South Lambeth, the first volume of a series of Nautical Experiments, by his father, the late Col. Mark Beaufoy, F. R. S. &c., which publication is to be comprized in three volumes Royal Quarto, illustrated with Engravings by the first artists, and is not intended for sale, but to be distributed among such societies and individuals, as may feel an interest in its subjects. In pursuance of this liberal intention, the work has been presented to the College since the last meeting of the Trustees, and in the recess of the Board, the President loses no time in acknowledging this splendid donation, as well as the valuable gifts of Archbishop Whately.

The liberalizing influence of learning and letters, is very agreeably evinced in the recent presentations by the British Government in some instances, and by munificent individuals in others, of valuable records and publications, to literary institutions in our country.

A notice appeared in our columns a day or two since, from the President of Columbia College, acknowledging the receipt of several such presents—among them, that from *Henry Beaufoy*, Esq. of Surry, England, embodying the nautical and hydraulic experiments, &c. of his father, Col. *Mark Beaufoy*.—It gives us pleasure to state, as we are authorized to do, that a copy of this work has also been sent to, and received by, the *Naval Lyceum* at Brooklyn, and another for the use of the Navy Yard there.

The Albany Institute, too, as we perceive by the Albany Argus, has received a copy, as have some distinguished individuals among us. Mr. *G. C. Verplanck*, we know has, and there are others to whom the liberal Editor has transmitted this best record of a father's talents, and of a son's admiration and respect.

NEW-YORK AMERICAN.

OCTOBER 11—17, 1834.

LITERARY NOTICES.

THE AMERICAN LIBRARY, No. 2—by Samuel L Knapp—New-York, CHARLES LOHMAN & Co.

This cheap weekly publication was, on the appearance of the first number, commended to our readers, as one specially deserving patronage from Americans, for it is devoted to illustrate their early history; this second number continues the biographies of the most distinguished early discoverers—the price only sixpence per number. The Editor would, we think, add to the value of his work, especially in the eyes of those who are fond of historical research, by giving the authorities, on which he relies, or from which he obtains his facts.

THE NORTH AMERICAN REVIEW, No. LXXXV—BOSTON, CHARLES BOWEN.—The first paper in this number is a curious one. It is a record of the origin and progress of periodical literature in this country. After reading the annexed extract, and then looking at things as they are, with newspapers, pamphlets, magazines, and reviews, so abundant as almost to defy enumeration, we may realize something of the "march of mind," about which so much has been said.

The first newspaper in these colonies, in fact began about the same time with the first Scottish Gazette, in the year 1704. It was called 'the Boston News Letter, published by authority,' and was issued every Monday, at a house, part of which is, or was lately standing, behind what was No. 56, Newbury street. The printer was Bartholomew Green, son of Samuel, whom we have mentioned as printer to the college; a person of consideration, and several years a deacon of the Old South Church. Among other subjects of commendation urged in his obituary, is his 'caution of publishing any thing offensive, light or hurtful.' The proprietor, however, for the first eighteen years, was John Campbell, a Scotchman by birth, the postmaster of the town, whose office, without supposing it to have exercised, in him, the sharp intuition of his countrywoman, the postmistress of St. Ronan's Well, naturally gave him the freest access to intelligence useful to his work. At the end of eighteen years it fell into the hands of Green, and by him and his successors was continued till the evacuation of Boston by the British troops in 1776, being in later years the organ of the Tory party, and the only paper continued in Boston through the siege.

William Brooker, being appointed Campbell's successor in the post office, resolved to turn his official advantage to similar account, and accordingly, Dec. 21st, 1719, set up the second newspaper in the colonies, called the Boston Gazette, employing James Franklin for his printer. In two or three months after, Brooker, in his turn, was superseded by Philip Musgrave, who accordingly coming into possession of the newspaper, gave the printing of it to Samuel Kneeland, a former apprentice of Green, who issued it for eight years from his printing house at the corner of Prison lane (now Court street) and Dorset's alley, an estate constantly occupied in this manner from the year 1718, till within the lifetime of the present generation.

At the end of this term, a new postmaster, coming into possession of the Gazette, naturally looked to his own line of patronage in the way of printing; and Kneeland, experiencing the common lot of dependants on the great, and thrown again upon his own resources by a like turn in the wheel to that on which he had risen, indemnified himself by setting up the New England Journal on his private account, with the benefit of his past experience, and the knowledge acquired, in his palmy days, of matters behind the veil of state. This journal was largely aided by such considerable men as Judge Danforth, and Mather Byles the elder, and took a leading part in the religious disputes of the time, on the side of Edwards and Whitefield. Its publication was carried on for fifteen years, at the end of which time it was united with the Gazette, under the name of the Boston Gazette, and Weekly Journal, and so continued to be published till 1752, when Kneeland, separating himself from a partner in the printing business took another departure on the editorial voyage, with the name of the Boston Gazette, or Weekly Advertiser, containing, as its inscription read, 'the freshest advices, foreign and domestic.' It was published but two years, being one of the victims of the provincial stamp act.

Meanwhile, there had been a great episode in the newspaper history; great, as the event connects itself with an immortal name. The first number of the New England Courant, the third journal in Boston, which was continued but six years, was issued Aug. 17th 1721, by James Franklin, who, as was mentioned above, had been previously employed a short time in printing the Gazette. The two first papers had helped each other, for the News Letter languished till the Gazette was set up, and never languished after. But the profits of collision have a limit; and in order to get forward under the disadvantages of so undue a competition, as that of two other newspapers in such a village, it was needful to strike some new and bold stroke for popularity. Franklin took the obvious course of free and offensive comment on the respected men and opinions of the day; calculating, no doubt, that there were enough who would relish seeing their betters called in question, to secure to him a prompt patronage, amd perhaps, if he looked further, persuading himself that having become a troublesome, and feared and so prosperous and important man, he might when ever the time was ripe, become a forbearing, and then a courted and trusted man at his leisure.—He was aided in his editorial labors by a society called by moderate people, the "Free-thinkers," and qualified by others with the less euphonious appellation of "the Hell-fire club." But the master spirit in the Courant's better days was Franklin's brother Benjamin, then a boy apprenticed in the office. The paper provoked the severe displeasure of the clergy and the government, which the latter did not fail to manifest in the processes of legislative and judicial action. All this it might have continued, with good management and a portion of the popular favor, to brave or evade, and thrive upon, but Franklin was indiscreet enough to quarrel with his brother; and with his elopement to Philadelphia, the glory departed from the Courant, and its weak life soon expired.—After Benjamin had abstracted himself, the Courant continued to be published in his name, as it had been for some time before,—though he was a minor,—in consequence of an order of the General Court, forbidding its publication on the part of James.

Four years after the Courier had come to its end, the Weekly Rehearsal was set on foot by the famous Jeremy Gridley, afterwards attorney general of Massachusetts Bay, then a young lawyer of brilliant promise. At the end of a year, he wearied of the work on which he had expended much classical lore, and the labor of weekly essays full of sense and entertainment; and it went into the hands of Thomas Fleet, an Englishman by birth, and a printer by trade, who had brought himself into trouble in London by his antipathy to the high church party, manifested in a studied affront to the procession in honor of Dr. Sacheverel. He then lived, as his posterity do now, at the corner of Washington street and Water street, a spot long distinguished by the sign of the Heart and Crown, and afterwards, when crowns went out of credit, by that of the Heart and Bible. Fleet was a humorist,—a man of talent and energy, and possessing uncommon resources, in his mind and experience, for his present undertaking. His satire was generally good-natured, and always free and copious. He fully preserved the latter strain, and somewaat abandoned the former, in an attack on Whitefield, then at the height of his popularity. For some unexplained reason, he changed the name of the Rehearsal, after printing it about two years, to that of the Boston Evening Post. This he continued thirteen years longer, to the time of his death, and it was undoubtedly much the best paper of its time. It was brought down by his two sons to the month of the Lexington battle.

Before the year 1750, only two newspapers, in addition to what have been mentioned, were established in Boston; the Weekly Post Boy in 1734, and the Independent Advertiser, in 1748. The first, which was continued about twenty years, was, like others before, established by a postmaster; that official, it would seem, in our ancient times, not being expected, more than an aspiring statesman in the modern, to be without a paper of his own. The latter, set up in 1748, was, through its short life of two years, of political importance; and among other leading names in the leading Whig circles, is said to have had Samuel Adams for one of its contributors.

The two first newspapers in the colonies, out of Boston, were the American Weekly Mercury, printed in Philadelphia by Andrew Bradford, begun December 22d, 1719, and the New-York Gazette by William Bradford, dated from Oct. 16th, 1728. Up to the year 1750, besides the seven Boston papers, already spoken of, the whole number undertaken in British America was thirteen, viz. the Rhode Island Gazette, begun in Newport in 1732; in New-York, the New-York Gazette, already mentioned, and three others; in Pennsylvania, the American Weekly Mercury, mentioned before, the Pennsylvania Gazette, purchased by Franklin in 1729, within a year after its establishment, and conducted by him for thirty years, and two others, one in German; the Maryland Gazette, published at Annapolis; and dating from 1728; the Virginia Gazette, from 1736; and two successive South Carolina Gazettes, at Charleston, from 1731 and 1734.

In the excited times, which followed the year 1750, the French war then about coming on, and afterwards the disputes which eventuated in the revolutionary struggle, the number of newspapers increased with comparative rapidity. We shall not undertake to follow their history further; but, before leaving this part of our subject, will select a few facts illustrative of similarity or difference between their remote and their recent relations to the community which they illuminated, and partially of the taste, resources, manners, and feelings of the times.

The first papers were commonly printed on a half sheet of pot paper. Occasionally, when there was a special press of matter, like what now calls forth the supplement, a whole sheet was used. Sometimes they were printed in folio, sometimes in quarto, no scrupulous regard being had to the convenience of binding. The News Letter introduced itself with an advertisement as follows.

'This News-letter is to be continued weekly; and all persons who have any Houses, Lands, Tenements, Farms, Ships, Vessels, Goods, Wares or Merchandizes, &c., to be sold or let, or servants runaway, or goods stole or lost, may have the same inserted at a reasonable rate, from twelve pence to five shillings, and not to exceed, who may agree with Nicholas Bonne for the same at his shop next door to Major Davis', apothecary in Boston near the old Meeting House. All persons in town and country may have said News-letter weekly upon reasonable terms, agreeing with John Campbell, postmaster of New England, at Boston, for the same.'

There were only four or five post offices at this time in British America. There was one advertisement in the News Letter's first number, and two in the second.

Of the remaining articles in this number of the Review, we may speak hereafter.

THE PROTESTANT EPISCOPAL PULPIT, No 10, vol. IV. New York, JOHN MOORE.—The number before us of this religious periodical contains a Sermon by the Rev. *J. P. K. Henshaw*, D.D., of St. Peter's Church, Baltimore, on the "the Past State and Present Prospects of the Church." The publisher gives notice that he will, if adequately encouraged, supply the *fifth volume* of the Pulpit, at the low price of *one dollar*.

ITALY, WITH SKETCHES OF SPAIN AND PORTUGAL; by the author of *Vathek*; 2 vols. Philadelphia *Key & Biddle*, for sale in New York by *J. Wiley & Co.*—The pampered child of fortune, "England's wealthiest son," the luxurious, the highly educated, the solitary Beckford, here presents us with letters descriptive at a period long-gone-by, of the beauties, the fair landscapes, and other natural phenomena of Italy,—scenes which—as the preliminary advertisement, in referring to human institutions, well says—while the "old order of things, with all its picturesque pomps and absurdities," has disappeared, it "is not in the power of revolutions or constitutions to alter, or destroy."

The singular being who now publishes, after the lapse of half a century, letters written in the heyday of youth and brilliant hopes, is known only by report to the present generation by the fantastic wonders of Fonthill Abbey. His eastern tale of *Vathek*, so highly praised by Lord Byron, has not, that we are aware, been re-published in this country. It struck us when we read it—many years ago—as quite as remarkable for its pure and idiomatic French, in which language it was written, as for its lively picture of Eastern manners.

It is among our agreeable impressions of past

days, to have wandered in company with Mr. Canning—then the British Ambassador at Lisbon—through the deserted halls, the doorless apartments and roofless galleries of the beautiful dwelling which Mr. Beckford had so picturesquely embosomed amid the exquisitely picturesque mountains of Cintra. It had long been untenanted. Its frescos had faded; and even in that lovely climate the damps had cast down the stuccoed ceilings, beneath which, in other days, the Wanderer had dwelt and revelled. All within was desolate; but without and around Nature was beautiful, magnificent, and bounteous as ever. The contrast was striking; and it recurs not the less strongly to memory now, from the reflection that the polished taste, the fine fancy, and the gentle courtesy, of the distinguished orator and statesman whose remarks we then—a traveller from a distant land—listened to with so much delight—are numbered too among the things that were.

But we are wandering from the matter before us. These "Sketches" are by a master hand; they evince throughout high refinement, a quick and admirable perception of the beautiful in art and in nature, and a mind rich in knowledge and instruction. Venice with her lagoons, her Rialto, and her bridge of Sighs—is, materially speaking, the same now as when Beckford saw her; but her population, her commerce, her nobles, her wealth, and her crimes—how shrunk away! Hear of Venice as it then was:

August 2, 1780.—Our route to Venice lay winding about the variegated plains I had surveyed from Mosolente; and after dining at Treviso, we came in two hours and a half to Mestre, between grand villas and gardens peopled with statues. Embarking our baggage at the last-mentioned place, we stepped into a gondola, whose every motion was very agreeable, after the jolts of a chaise. We were soon out of the canal of the Mestre, terminated by an isle which contains a cell dedicated to the Holy Virgin, peeping out of a thicket, whence spire up two tall cypresses. Its bells tingled as we passed along and dropped some paolis into a net tied at the end of a pole stretched out to us for that purpose.

As soon as we had doubled the cape of this diminutive island, an expanse of sea opened to our view, the domes and towers of Venice rising from its bosom. Now we began to distinguish Murano, St. Michele, St. Georgio in Alga, and several other islands, detached from the grand cluster, which I hailed as old acquaintances; innumerable prints and drawings having long since made their shapes familiar. Still gliding forward, we every moment distinguished some new church or palace in the city, suffused with the rays of the setting sun, and reflected with all their glow of coloring from the surface of the waters.

The air was calm; the sky cloudless: a faint wind just breathing upon the deep, lightly bore its surface against the steps of a chapel in the island of San Secondo, and waved the veil before its portal, as we rode by and coasted the walls of its garden overhung with fig-trees and surmounted by spreading pines. The convent discovered itself through their branches, built in a style somewhat Morisco, and level with the sea, except where the garden intervenes.

We were now drawing very near the city, and a confused hum began to interrupt the evening stillness; gondolas were continually passing and repassing, and the entrance of the Canal Reggio, with all its stir and bustle, lay before us. Our gondoliers turned with much address through a crowd of boats and barges that blocked up the way, and rowed smoothly by the side of a broad pavement, covered with people in all dresses, and of all nations.

Leaving the Palazzo Pesaro, a noble structure with two rows of arcades and a superb rustic behind, we were soon landed before the Leon Bianco, which being situated in one of the broadest parts of the grand canal, commands a most striking assemblage of buildings. I have no terms to describe the variety of pillars, of pediments, of mouldings, and cornices, some Grecian, others Saracenic, that adorn these edifices, of which the pencil of Canaletti conveys so perfect an idea as to render all verbal description superfluous. At one end of this grand scene of perspective appears the Rialto; the sweep of the canal conceals the other.

The rooms of our hotel are spacious and cheerful; a lofty hall, or rather gallery, painted with grotesque in a very good style, perfectly clean, floored with a marbled stucco, divides the house, and admits a refreshing current of air. Several windows near the ceiling look into this vast apartment, which serves in lieu of a court, and is rendered perfectly luminous by a glazed arcade, thrown open to catch breezes. Through it I passed to a balcony which impends over the canal, and is twined round with plants forming a green festoon springing from two large vases of orange trees placed at each end. Here I established myself to enjoy the cool, and observe, as well as the dusk would permit, the variety of figures shooting by in their gondolas.

As night approached, innumerable tapers glimmered through the awnings before the windows.—Every boat had its lantern, and the gondolas moving rapidly along were followed by tracks of light, which gleamed and played upon the waters. I was gazing at these dancing fires when the sounds of music were wafted along the canals, and as they grew louder and louder, an illuminated barge, filled with musicians, issued from the Rialto, and stopping under one of the palaces, began a serenade, which stilled every clamor and suspended all conversation in the galleries and porticos; till, rowing slowly away, it was heard no more. The gondoliers catching the air, imitated its cadences, and were answered by others at a distance, whose voices, echoed by the arch of the bridge, acquired a plaintive and interesting tone. I retired to rest, full of the sound; and long after I was asleep, the melody seemed to vibrate in my ear.

August 3.—It was not five oclock before I was aroused by a loud din of voices and splashing of water under my balcony. Looking out, I beheld the grand canal so entirely covered with fruits and vegetables, on rafts and in barges, that I could scarcely distinguish a wave. Loads of grapes, peaches, and melons, arrived, and disappeared in an instant, for every vessel was in motion; and the crowds of purchasers hurrying from boat to boat, formed a very lively picture. Amongst the multitudes, I remarked a good many whose dress and carriage announced something above the common rank; and upon inquiry I found they were noble Venitians, just come from their casinos, and met to refresh themselves with fruit, before they retired to sleep for the day.

Whilst I was observing them, the sun began to color the balustrades of the palaces, and the pure exhilerating air of the morning drawing me abroad, I procured a gondola, laid in my provision of bread and grapes, and was rowed under the Rialto, down the grand canal to the marble steps of S. Maria della Saluto, erected by the senate in performance of a vow to the Holy Virgin, who begged off a terrible pestilence in 1630. The great bronze portal opened whilst I was standing on the steps which lead to it, and discovered the interior of the dome, where I expatiated in solitude; no mortal appearing except an old priest who trimmed the lamps and muttered a prayer before the high altar, still wrapped in shadows. The sun-beams began to strike against the windows of the cupola, just as I left the church and was wafted across the waves to the spacious platform in front of St. Giorgio Maggiore, one of the most celebrated works of Palladio.

When my first transport was a little subsided, and I had examined the graceful design of each particular ornament, and united the just proportion and grand effect of the whole in my mind, I planted my umbrella on the margin of the sea, and viewed at my leisnre the vast range of palaces, of porticos, of towers, opening on every side and extending out of sight. The doge's palace and the tall columns at the entrance of the place of St. Mark, form, together with the arcades of the public library, the lofty Campanile and the cupolas of the ducal church, one of the most striking groups of buildings that art can boast of.—To behold at one glance these stately fabrics, so illustrious in the records of former ages, before which, in the flourishing times of the republic, so many valiant chiefs and princes, have landed, loaded with oriental spoils, was a spectacle I had long and ardently desired. I thought of the days of Fredrick Barborossa, when looking up the piazza of St. Mark, along which he marched in solemn procession, to cast himself at the feet of Alexander the Third, and pay a tardy homage to St. Peter's successor. Here were no longer those splendid fleets that attended his progress; one solitary galeass was all I beheld, anchored opposite the palace of the doge, and surrounded by crowds of gondolas, whose sable hues contrasted strongly with its vermillion oars and shining ornaments. A party colored multitude was continually shifting from one side of the piazza to the other; whilst senators and magistrates in long black robes were already arriving to fill their respective offices.

I contemplated the busy scene from my peaceful platform, where nothing stirred but aged devotees creeping to their devotions, and, whilst I remained thus calm and tranquil, heard the distant buzz of the town. Fortunately some length of waves rolled between me and its tumults; so that I ate my grapes, and read Metastasio, undisturbed by officiousness or curiosity. When the sun became too powerful, I entered the nave.

The second volume relates to Portugal and Spain; and is not less striking than the first. Beckford's delight in the beauties of Cintra on this occasion, led him to his subsequent residence there.

Visits and Sketches at Home and Abroad, &c. &c.; by Mrs. Jameson, author of the Characteristics of Women, &c., 2 vols. New York, *Harper & Brothers*.—The Diary of an Ennuyée,—which by the-by is republished in the second of these volumes,—was so well received by the public, though ushered forth and running its race of popularity anonimously, that Mrs. Jameson would have had no excuse, even if she had so desired, for refraining from further literary efforts. In the *Characteristics of Women*, which combine so much force of criticism, with so much delicacy of feeling and of taste, she well repaid and justified the favorable opinion which her anonymous work had called forth: and these Sketches will sustain the ordeal—not a light one,—of being tried, by what she has done before.

They are the result of a visit to Germany, not with any view to write a book, but really, as is explained in the prefatory notice, the enlarging and throwing into a sort of dramatic form, by introducing dialogues and interlocuters, the casual notes made for her own satisfaction during the tour. The spirit in which they are written seems to us upright and fair, and the style renders them very attractive.

We introduce our Ennuyée, not by any means *ennuyante*, talking of *Schlegel* and *Madame de Stael*.

Alad.—Instead of embarking in the steamboat we posted along the left bank of the Rhine, spending a few days at Bonn, at Godesberg, and at Ehrenbreitstein; but I should tell you, as you allow me to diverge, that on my second journey I owed much to a residence of some weeks at Bonn. There I became acquainted with the celebrated Schlegel, or I should rather say, M. le Chevalier de Schlegel, for I believe his titles and his "starry honors" are not indifferent to him; and in truth he wears them very gracefully. I was rather surprized to find in this sublime and eloquent critic, this awful scholar, whose comprehensive mind has grasped the whole universe of art, a most agreeable, lively, social being. Of the judgments passed on him in his own country I know little and understand less; I am not deep in German literary polemics. To me he was the author of the lectures on "Dramatic Literature, and the translator of Shakspeare, and, moreover, all that was amiable and polite: and was not this enough?

Medon.—Enough for you, certainly; but I believe that at this time Schlegel would rather found his fame on being one of the greatest oriental critics of the age, than on being the interpreter of the beauties of Calderon and Shakespeare.

Alda.—I believe so; but for my own part, I would rather hear him talk of Romeo and Juliet, and of Madame de Stael, that of Ramayana, the Bhagvat-Oita, or even the "eastern Con-fut-zee."—This, of course, is only a proof of my own ignorance. Conversation may be compared to a lyre with seven chords—philosophy, art, poetry, politics, love, scandal, and the weather. There are some professors who, like Paganini, "can discourse most eloquent music" upon one string only; and some who can grasp the whole instrument, and with a master's hand sound it from the top to the bottom of its compass. Now, Schlegel is one of the latter: he can thunder in the bass or caper in the treble; he can be a whole concert in himself. No man can trifle like him, nor, like him, blend in a few hours' converse the critic, philologist, poet, philosopher, and man of the world—no man narrates more gracefully, nor more happily illustrates a casual thought. He told me many interesting things. "Do you know" said he one morning, as I was looking at a beautiful edition of Corinne, bound in red morocco, the gift of Madame de Stael, "do you know that I figure in that book?" I asked eagerly in what character? He bade me

guess. I guessed, playfully, the Counte d'Erfeuil. "No! no!" said he, laughing, "I am immortalized in the Prince Castle-Forto, the faithful, humble, unaspiring friend of Corinne."

MEDON.—To any man but Schlegel such an immortality were worth a life. Nay, there is no man, though his fame extended to the ends of the earth, whom the pen of Madame de Stael could not honor.

ALDA.—He seemed to think so, and I liked him for the self complacency with which he twined her little myrtle leaf with his own palmy honors. Nor did he once refer to what I believe everybody knows, her obligations to him in her De l'Allemagne.

MEDON.—Apropos—do tell me what is the general opinion of that book among the Germans themselves.

ALDA.—I think they do not judge it fairly. Some speak of it as eloquent, but superficial; others denounce it altogether as a work full of mistakes, and flippant, presumptuous criticism: others again affect to speak of it, and even of Madame de Stael herself, as thing of another era, quite gone by and forgotten; this appeared to me too ridiculous. They forget, or do not know, that *we* know, that her De l'Allemagne was the first book which awakened in France and England a lively and general interest in German art and literature. It is now five-and-twenty years since it was published. The march of opinion, and criticism, and knowledge of every kind has been so rapid, that much has become old which then was new; but this does not detract from its merits. Once or twice I tried to convince my German friends that they were exceedingly ungrateful in abusing Madame de Stael, but it was all in vain: so I sat swelling with indignation to hear my idol traduced, and called—O profanation!—"*cette Stael.*"

MEDON.—But do you think the Germans could at all appreciate or understand such a phenomenon as Madam de Stael must have appeared in those days? She whisked through their skies like a meteor before they could bring the telescope of their wits to a right focus for observation. How she must have made them open their eyes!—and see in the correspondence between Goethe and Schiller what *they* thought of her.

ALDA.—Yes, I know that with her lively egotism and Parisian volubility, she stunned Schiller and teased Goethe; but while our estimate of manner is relative, our estimate of character should be positive. Madame de Stael was in manner the French woman, accustomed to be the cynosure of a salon, but she was not ridiculous or egoiste in character.—She was, to use Schlegel's expression, "femme grande et magnanimie jusque dans les replis de son âme." The best proof is the very spirit in which she viewed Germany, in spite of all her natural and national prejudices. To apply to your own expression, she went forth in the spirit of peace, and brought back, not only an olive leaf, but a whole tree, and it has flourished. She had a universal mind. I believe she never thought, and still less *made* any one ridiculous in her life.

We present next an educated woman herself, expressing her opinion of the German women.

MEDON.—You said, the other night, that you had not formed any opinion as to the moral and social position of the women of Germany; but you must have brought away some general impressions of manner and character;—frankly, were they favorable or unfavorable?

ALDA.—Frankly, they were most favorable. Remember that I am not prepared with any general sweeping conclusions: I cannot assure you, from my own knowledge, that among my own sex the proportion of virtue and happiness is greater in Germany than in England. On the contrary—

> ——— In every land
> I saw, wherever light illumineth,
> Beauty and anguish walking hand in hand,
> The downward slope to death.
>
> In every land I thought that, more or less,
> The stronger, sterner nature overbore
> The softer, uncontroll'd by gentleness,
> And selfish evermore!

—Why do you smile?

MEDON.—You amuse me with the perseverance with which you ring the changes on your favorite text, in prose and in verse; and yet to adopt Voltaire's witty metaphor, *we* are the hammers and *you* the anvils all the world over. But is that all? You need not have gone to Germany to verify that!

ALDA.—No, sir; it is not *all*. In the first place, you know I have a sufficient contempt for our English intolerance with regard to manners—

MEDON.—Why, yes; with reason. The influence of mere *manners* among our fashionable people, and the stress laid upon it as a distinction, have become so vulgarized and abused, that I should be relieved even by a reaction which should throw us out of the insipidity of conventional manners into primeval rudeness.

ALDA.—No, no, no!—no extremes; but though so sensible to the ridicule of referring the social habits, opinions, customs of other nations, to the arbitrary standard of our own, still I could not help falling into comparisons; certain distinctions between the German and the English women struck me involuntarily. In the highest circles a stranger finds society much alike every where. A court ball—the *soirée* of an ambassadress—a minister's dinner—present nearly the same physiognomy. It is in the second class of society, which is also every where, and in every sense, the best, that we behold the stamp of national character. I was not condemned to see my German friends always *en grande toilette*: I had better opportunities of judging and appreciating their domestic habits and manners than most travellers enjoy.

I thought the German women of a certain rank more *natural* than we are. The moral education of an English girl, is, for the most part, *negative;* the whole system of duty is thus presented to the mind. It is not "this you must do," but always "you must not do this—you must not say that—you must not think so:" and if by some hardy, expanding nature the question be ventured, "Why?—the mamma or the governess is ready with the answer—"It is not the custom—it is not lady-like—it is ridiculous!"—But is it wrong?—why is it wrong?—and then comes answer, pat—"My dear, you must not argue—young ladies never argue."—"But, mamma, I was thinking—"—"My dear, you must not think—go write your Italian exercise;" and so on! The idea that certain passions, powers, tempers, feelings, interwoven with our being by our almighty and alwise Creator, are to be put down by the fiat of a governess, or the edict of fashion, is monstrous.—Those who educate us imagine that they have done every thing, if they have silenced controversy, if they have suppressed all external demonstration of an excess of temper or feeling; not knowing, or not reflecting, that unless our nature be self-governed and self directed by an appeal to those higher faculties which link us immediately with what is divine, their labor is lost

Now, in Germany, the women are less educated to suit some particular fashion; the cultivation of the intellect, and the forming of the manners, do not so generally supersede the training of the moral sentiments—the affections—the impulses; the latter are not so habitually crushed or disguised; consequen ly the women appeared to me more natural, and to have more individual character.

MEDON.—But the English women pique themselves on being natural; at least they have the word continually in their mouths. Do you know that I once overheard a well-meaning mother instructing her daughter how to be natural? You laugh, but I assure you it is a simple fact. Now, I really do not object to natural insipidity, but I do object to conventional insipidity; I object to a rule of elegance which makes the negative the test of the natural. It seems hard that those who have hearts and souls must needs put them into a strait-waistcoat, in order to oblige those who choose to have none; and be guilty of the grossest affectation, to escape the imputation of being affected!

ALDA.—I think there is less of this among the Germans; more of the individual character is brought into the daily intercourse of society—more of the poetry of existence is brought to bear on the common realities of life. I saw a freshness of feeling—a genuine (not a taught) simplicity, which charmed me. Sometimes I have seen affectation, but it amused me; it consisted in the exaggeration of what is in itself good, not in the mean renunciation of our individuality—the immolation of our soul's truth to a mere fashion of behaviour. As Rechefoucald called hypocrisy, (that last extreme of wickedness,) "*the homage which vice pays to virtue;*" so the *nature de convention*, that last and worst excess of affectation, is the homage which the artificial pays to the natural.

The German women are much more engrossed by the cares of housekeeping than women of a similar rank of life in England. They carry this too far in many instances, as we do the opposite extreme. In England, with our false, conventional refinement, we attach an idea of vulgarity to certain cares and duties in which there is nothing vulgar. To see the young and beautiful daughter of a lady of rank running about, busied in household matters, with the keys of the wine-cellar and the store-room suspended to her sash, would certainly surprise a young Englishwoman, who, meantime, is netting a purse, painting a rose, or warbling some "Dolce mio Bene," or "Soavi Palpiti," with the air of a nun at penance. The description of Werter's Charlotte, cutting bread and butter, has been an eternal subject of laughter among the English, among whom fine sentiment must be garnished out with something finer than itself; and no princess can be suffered to go mad, or even be in love, except in white satin. To any one who has lived in Germany, the union of sentiment and bread and butter, or of poetry with household cares, excites no laughter. The wife of a state minister once excused herself from going with me to a picture gallery, because on that day she was obliged to reckon up the household linen; she was one of the most charming, truly elegant, and accomplished women I ever met with. At another time, I remember that a very accomplished woman, who had herself figured in a court, could not do something or other—I forget what—because it was the "grosse wasche" (the great wash;) an event by-the-way, which I often found very mal-apropos, and which never failed to turn a German household upside-down. You must remember that I am not speaking of tradesmen and mechanics, but of people of my own, or even a superior, rank of life. It is true that I met with cases in which the women had, without necessity, sunk into mere domestic drudges—women whose souls were in their kitchen and their household stuff—whose talk was of dishes and of condiments; but then the same species of women in England would have been, instead of busy with the idea of being useful, frivolous and silly, without any idea at all.

MEDON.—And whether a woman put her soul into an apple tart or a new bonnet signifies little, if there be no capacity there for any thing better. I hate mere fine ladies; but equally avoid those who seem born to "suckle fools and chronicle small beer." The accomplishments which embellish social life—the cultivation which raises you to a companionship with men—I cannot spare these to make mere nurses and housewives, as I conceive the generality of German aim to be, and which I have been told the opinions of the men approve.

ALDA.—As to what we term accomplishments, there was certainly much less exhibition and parade of them in society; they formed less an established and necessary part of education than with us; but, of really accomplished, well-informed women, believe me, I found no deficiency: if the inclination or the talent existed, means and opportunity were not wanting for mental culture of a very high species. I met with fewer women who drew badly, sang tolerbly, or rather intolerably, scratched the harp, and quoted Metastasio; but I met with quite as many women who, without pretension, were finished musicians, painted like artists, possessed an extensive acquaintance with their own literature, and an uncommon knowledge of languages; and were, besides, very good housewives after the German fashion. More or less acquainted with the French language, was a matter of course, but English was preferred: every where I met with women who had cultivated with success, not our language merely, but our literature. Shakspeare, whether studied in English or in some of their excellent translations, I found to be a species of household god, whose very name was breathed with reverence, as if it were that of a supernatural being. Lord Byron, and Sir Walter Scott, and Campbell are familiar names.

At the close of the first volume is a charming paper on Fanny Kemble. The first part of it was intended to accompany sketches taken of her in various scenes in Juliet by I. Hayter, and then designed for publication. They have not however been published; but the notes, critical and explanatory, are here given, with some additional remarks of more recent origin.

SUMMARY.

American Academy of Arts, Barclay st.—There has been recently opened at the above establishment, an exhibition of considerable merit and novelty from the peculiar manner in which the paintings are exhibited. They consist of five views, as follows: 1st, The Interior of Trinity Chapel in Canterbury Cathedral, is a true specimen of Saxon Gothic Architecture; and having been built about 1300 years, has a certain claim to our admiration from its antiquity; and the exquisite manner in which it is painted: the long line of perspective, the transparent windows of stained glass, and its round columns, all conspire to

give this picture an air of perfect reality and illusion. 2d, The Painting of Captain Ross's Interview with the natives at the North Pole, conveys a perfect idea of the barrenness of that inhospitable climate and the singular appearance of the inhabitants of those frozen regions, painted from Capt. Ross's own drawings and under his own superintendence. 3d, The View of London is exceedingly minute in its detail, showing all the public Buildings, Churches and Bridges, &c., and to the inhabitants of this city highly interesting. 4th, The Destruction of the Temple and City of Jerusalem by that celebrated artist, Mr. West, is one of the many splended Illustrations of Scripture History which he designed. 5th, The Kent India man on Fire, is one of those dreadfully appalling spectacles which happily do not often occur; but the artist has truly depicted it, and to us as a maritime people is a matter of peculiar attraction. In addition to the Paintings, there are four figures dressed in suits of ancient armor, one of which is 700 years old, of exceeding curious and rare workmanship and mechanism. Taking the exhibition as a whole it deserves extensive patronage.

Mr. Eugene Robertson's Exhibition at the Euterpian Hall, continues to attract, as we hear, many visiters.

It is one of optical illusions chiefly—Washington, Napoleon, and Lafayette, are evoked, the influence of dreams is typified, and strange and unearthly visions are, as it were, embodied.

The Exhibition will soon close, and those, therefore, desirous of seeing such sights, should improve the opportunity.

Burning of the Steamboat Cygnet.—On Tuesday night, at about 12 o'clock, the Steamboat Cygnet, lying at Janney's wharf in this town, was discovered to be on fire. The alarm was immediately given; but in a very short time the boat was completely enveloped in fire, and it was found impossible to save her. She burned to the water's edge.—[Alexandria Phenix.]

[*From the Pittsburg Advocate of Monday last.*]

Dreadful Explosion and loss of life.—This morning about 5 o'clock, intelligence was brought to us of the explosion of the boilers of the Eagle Cotton Factory, in the borough of Allegheny, owned by Messrs Arbuckle & Avery. Hastening to the scene of calamity, never did we look upon a spectacle so full of horror. The extensive building is almost an entire ruin, a mass of stones, brick and rubbish. The building, and much of the costly and extensive machinery are utterly lost and destroyed; but the loss of the property is small compared with the loss of life, and the agony and misery which have resulted. So far as we could gather the circumstances, they are these. The boilers had been suffered through neglect or inattention to become heated before the water was let into them, which caused the heads to be blown out—and the concussion was so great that they rose from their beds, and passing out of the engine house, overturned a small office attached to the buildings, and were finally arrested by a large board pile in the rear of the building, which it completely shivered to pieces.—A machinist, James Marlatt, a Frenchman, was killed instantaneously, and the First Engineer, Alexander Morrow, so badly scalded as to leave no hopes of his recovery. Two boys, named James Heming and —— Dodd, are missing, supposed to be lying dead amongst the rubbish, which is now being removed Another boy killed, name not recollected. Three young women at work in the factory were very badly wounded, all of them having limbs broken.

It was a fortunate circumstance that the explosion occurred at an earlier hour than that at which most of the hands are accustomed to be at work—had it been an hour later, the disaster would have been very great; as it is, the extent of injury is not yet known, as several are missing, of whom it is not known whether they were on duty or not.

Commercial Bank of Buffalo.—This new institution, P. A. Barker, Esq. President, and Hamlet Scrantum, Esq. Cashier, has commenced operations. The new banking house is a splendid building, and all things are arranged in good taste.

New Orleans, September 29.—We have been informed by a gentleman who arrived yesterday from Natchez, that the Steamer Friend has been sunk by the Tom Jefferson running into her. Our informant was unable to give us the particulars.

The drought of the past summer had depressed many of the rivers to a lower point than has been known for many years past. The Susquehanna, at Harrisburg, has been three inches below the lowest water mark heretofore made—that is, in 1803,—The Ohio, at Cincinnati, was within six or eight inches of being as low as ever it was known to be

Cincinnati, Ohio, Sept. 28, 1834.—John Randolph once remarked on the floor of Congress, that "the Ohio River was frozen up one half the year, and dried up the other." This is not true; but the latter part of the assertion comes nearer the truth at this time, than for many years past. I think I have never seen the Ohio lower than at this time. It is said to be within six or eight inches as low as it has ever been known to be. At the time of the "flood" in February, 1832, the waters were some *sixty-five feet higher than at this time;* all the lower part of the city was inundated—that was the highest rise, in the memory of our oldest inhabitants, or on record.—Correspondence of the Baltimore Patriot.]

New Post Office.—A Post Office has been established at Hallet's Cove, L. I. to which a mail is sent from this city, every day except Sunday.

Sumatra.—The bark Alasco has arrived at Boston from Sumatra, whence she sailed on the 27th May. Her commander, Capt. Briggs, states that of all the American vessels on the coast, two or three only would be able to obtain cargoes, the crop of pepper this season being short of the usual quantity, and the English ships having carried away more than their usual proportion.—[Courier.]

Norfolk (Va.) Friday, 10th.—*Fire.*—The large wooden dwelling douse at the "Sycamores," was destroyed by fire this morning, between one and two o'clock. We have not learned the particulars. It was owned by Mr. Jonathan Bonney, and occupied by Mr. R. Doye, as a public house. We are informed that it was insured.

The North Star published at Whitehall says:

"The Collector at Champlain, (Gen. Thurber,) has been held to bail, in the sum of $60,000, by virtue of a writ issued against him at Washington. The charges set forth are, *converting the public property to his own use.*

[*From the Churchman.*]

Consecration of the French Church.—The beautiful and costly edifice recently erected at the intersection of Franklin and Church streets, for the French Protestant Episcopal Church Du St. Esprit was consecrated by the Right Rev. B. T. Onderdonk, D. D., Bishop of the Diocese of New York, on Thursday the 9th instant.

The instrument of donation was presented to the Bishop by John Pintard, Esq., and was read by the Rev. Antoine Verren, Rector of the Church, and a translation of it was read by the Rev. F. L. Hawks, D. D., Rector of St. Thomas' Church, New York.—The sentence of consecration was read by the Rev. James Milnor, D. D., Rector of St. George's Church New York, and a translation of it by the Rector of the Church Du St. Esprit. Divine service was performed in the French language by the Rev. R. A. Henderson, Minister of the Swedish Churches in Pennsylvania, the lessons being read by the Rev. L. P. Bayard, Rector of St. Clement's Church New York. The sermon was preached also in the French languague by the Rector of the Church.

The entire services were altogether satisfactory to a highly respectable and very numerous assemblage of hearers, and afforded a happy proof of the adaptation of our Liturgy to foreign languages, and of its peculiar impressiveness in the French language. The building, whose beauty harmonizes with the sublimity of the service for which it is intended, presents a pleasing proof of the regard of the present congregation for the memory and the language of their pious ancestors, and together they afford to a numerous and respectable class of residents and sojourners, in this "*city of strangers,*" a means of "*hearing in their own tongue the wonderful works of God.*"

Steamboat Monroe.—The new and elegant boat Monroe, Capt. Whittaker, from Monroe, M. T., came into our harbor on Wednesday last. She is decidedly one of the best models and neatly arranged boats on the lake, exhibiting great economy of room, and a simplicity and elegance of taste in her fixtures highly creditable to owners and builders; and furnishing another specimen of the growth and prosperity of the pretty town whose name she bears, and where she was built. She is 145 feet from stem to stern, 9 feet 9 inches hold, breadth of beam 26 feet. She has 23 berths in her gent's cabin, 20 in her ladies' cabin and state rooms; 51 in her forward cabin, and 20 steerage, being 104 cabin berths furnished. She is propelled by a superior high pressure engine, built at Detroit, by Thomas Moore, and is to ply between this port and Detroit; Barker & Holt, agents.—[Buffalo Journal.]

Lobsters.—We have omitted to notice the fact that we some days since dined with our host of the Eagle Tavern, on fresh lobsters. They were presented by Capt. Hebbard, of the steamboat Victory, who brought several from New York, in fine order, alive and kicking, and as good as any we have eat. This proves the fact that this delicious shell fish may be furnished in our market without difficulty. —[Buffalo Journal.]

Mexico.—The New Orleans mail brings advices 10 days later from Mexico than we had before received. The Convoy of specie had arrived safely at Vera Cruz, with upwards of three millions of dollars, of which about $600,000 was embarking on board the packet ship Congress, and brig Baron, both for this port; the former was to sail between the 18th and 20th ult., and the latter on the 15th. The country was quiet; and business in the interior reviving.

Melancholy Shipwreck.—*Seventeen lives lost.*—We learn from the Eastport Sentinel of the 8th inst. that the schr. *Sarah*, Capt. Thomas Pearce, on her passage from Boston to that port, was wrecked on the 2d inst., during a gale and thick fog on the Machias Seal Island, and that seventeen of the persons on board perished. Much anxiety had existed at Eastport for several days in consequence of the non-arrival of the vessel. In the meantime news of her sailing from Boston, the names of the passengers on board, and reports of parts of the wreck having been seen, reached Eastport, and caused the greatest anguish among the friends of the unfortunate sufferers. On the evening of the 2d, (says the Sentinel,) the Pilot-Boat No. 2, Capt. Connelly, arrived with the survivors, six in number. Peter Goulding, Esq. of Perry, a Mr. Jeffries, of New-Brunswick, the stewardess, and three seamen—all others, seventeen in number perished! These were Captain Pearce and son, Mr. John Swett, the mate, Mr. Ebenezer Starboard, and Joseph S. Cony, of this town,—a son of Hon. J. C. Talbot, of East Machias, Mr. William Fowler, and Mr. Featherstenaugh, of Lubec, Mr. Wiggins, and a Mr. Smith, of St. John, Mr. Darling of St. Stephens, a seaman, two forward passengers, the cook, and two others, whose names are unknown.

And now, what an awful visitation of God is here! Four husbands and fathers gone forever! and at a moment, when those who knew them best and loved them most, waited to hear the long expected words —"the Sarah is coming!"—Four widows—and ten fatherless children here—perhaps as many more elsewhere! and bleeding hearts—these—these who shall number?

The bodies of Messrs. Talbot, Smith & Fowler, and of the cook, were found,—that of Mr. Fowler was bro't to Lubec—the others were buried upon Seal Island. Those of the crew saved, are John Boole, of Shelburne, N. S., George Kirkas, and George Stowell, both Englishmen. Of those lost, whose names are not given, we learn that two of the forward passengers were seamen belonging to the brig Elizabeth, Barty, of St. John, discharged in Boston, that the seaman was Robert Dyer, of Pleasant River, and that the cook's name was Collins Warwick, and that he belonged to Nova Scotia.

We learn also, that on Friday, three schooners and a brig were off the Seal Islands, picking up goods, and that signals of distress were made from the Lighthouse, which they must have seen, but to which they paid no attention. May those who controlled their movements, never have the mercy measured to them, that it seems they measured to the survivors of the Sarah! The Sarah's cargo was valuable and belonged mostly to the merchants in this town. Mr. Fowler, of Lubec, and Mr. Goulding, of Perry, however, had considerable, the latter about $1100, no insurance. The amount insured by others, is unknown, but it is presumed less than half the value was covered.

Mr. Goulding and the Stewardess floated ashore upon the quarter deck. The seamen who were saved, jumped from the bows. Mr. Goulding was badly bruised.

Bills of indictment have been found against Matthias, *alias* Matthews, the pretended prophet, for obtaining money on false pretences. He will be arraigned this day, but probably not brought to trial unless he demands it, until the next General Sessions;

SAMUEL TAYLOR COLERIDGE.

By the English Opium Eater.

In the number of "Tate's Edinburgh Magazine," just published, there is an article on Mr. Coleridge, with the title which we have quoted, and from that we make the following extracts. The first describes the commencement of the accquaintance.

"I had received directions for finding out the house where Coleridge was visiting; and, in riding down a main street of Bridgewater, I noticed a gateway corresponding to the description given me. Under this was standing, and gazing about him, a man whom I shall describe. In height he might seem to be about five feet eight (he was, in reality, about an inch and a half taller, but his figure was of an order which drowns the height); his person was broad and full, and tended even to corpulence; his complexion was fair, though not what painters technically style fair, because it was associated with black hair; his eyes were large and soft in their expression; and it was from the peculiar appearance of haze or dreaminess which mixed with their light, that I recognized my object. This was Coleridge. I examined him steadily for a minute or more; and it struck me that he saw neither myself nor any other object in the street. He was in a deep reverie; for I had dismounted, made two or three trifling arrangements at an inn door, and advanced close to him, before he had apparently become conscious of my presence. The sound of my voice, announcing my own name, first awoke him; he started, and for a moment seemed at a loss to understand my purpose or his own situation; for he repeated rapidly a number of words which had no relation to either of us. There was no *mauvaise honte* in his manner, but simple perplexity, and an apparent difficulty in recovering his position amongst day-light realities. This little scene over, he received me with a kindness of manner so marked that it might be called gracious. * *

Coleridge led me to a drawing-room, rang the bell for refreshments, and omitted no point of a courteous reception. He told me that there would be a very large dinner party on that day, which might perhaps be disagreeable to a perfect stranger; but, if not, he could assure me of a most hospitable welcome from the family. I was too anxious to see him under all aspects, to think of declining this invitation. And these little points of business being settled, Coleridge, like some great river, the Orellana, or the St. Lawrence, that had been checked and fretted by rocks or thwarting islands, and suddenly recovers its volume of waters, and its mighty music—swept at once, as if returning to his natural business, into a continuous strain of eloquent dissertation, certainly the most novel, the most finely illustrated, and traversing the most spacious fields of thought, by transitions the most just and logical, that it was possible to conceive. * *

"For about three hours he had continued to talk, and in the course of this performance he had delivered many most striking aphorisms, embalming more weight of truth, and separately more deserving to be themselves embalmed, than any that are on record. In the midst of our conversation, if that can be called conversation which I so seldom sought to interrupt, and which did not often leave openings for contribution, the door opened and a lady entered. She was in person full, and rather below the common height; whilst her face showed, to my eye, some prettiness of rather a commonplace order. Coleridge turned, upon her entrance; his features, however, announced no particular complacency, and did not relax into a smile. In a frigid tone he said, whilst turning to me, "Mrs. Coleridge:" in some slight way he then presented me to her. I bowed; and the lady almost immediately retired. From this short but ungenial scene, I gathered, what I afterwards learned redundantly, that Coleridge's marriage had not been a very happy one. * * *

"The gloom, however, and the weight of dejection which sat upon Coleridge's countenance and deportment, at this time, could not be accounted for by a disappointment (if such it were) to which time must, long ago, have reconciled him. Mrs. Coleridge, if not turning to him the more amiable aspects of her character, was, at any rate, a respectable partner. And the season of youth was now passed. They had been married about ten years; had had four children, of whom three survived; and the interests of a father were now replacing those of a husband. Yet never had I beheld so profound an expression of cheerless despondency. And the restless activity of Coleridge's mind in chasing abstract truths, and burying himself in the dark places of human speculation, seemed to me, in a great measure, an attempt to escape out of his own personal wretchedness. At dinner, when a very numerous party had assembled, he knew that he was expected to talk, and exerted himself to meet the expectation. But he was evidently struggling with gloomy thoughts that prompted him to silence, and perhaps to solitude; he talked with effort, and passively resigned himself to the repeated misrepresentations of several amongst his hearers.—It must be to this period of Coleridge's life that Wordsworth refers in those exquisite 'Lines written in my pocket copy of the Castle of Indolence.' The passage which I mean comes after a description of Coleridge's countenance, and begins in some such terms as these:—

'A piteous sight it was to see this man,
When he came back to us, a wither'd flow'r,' &c.

Withered he was, indeed, and, to all appearance, blighted. At night he entered into a spontaneous explanation of this unhappy overclouding of his life, on occasion of my saying accidentally that a toothache had obliged me to take a few drops of laudanum. At what time or on what motive he had commenced the use of opium, he did not say; but the peculiar emphasis of horror with which he warned me against forming a habit of the same kind, impressed upon my mind a feeling that he never hoped to liberate himself from the bondage." * *

"The fine saying of Addison is familiar to most readers—that Babylon in ruins is not so affecting a spectacle, or so solemn, as a human mind overthrown by lunacy. How much more awful, then, and more magnificent a wreck, when a mind so regal as that of Coleridge is overthrown, or threatened with overthrow, not by a visitation of Providence, but by the treachery of his own will, and the conspiracy as it were of himself against himself! Was it possible that this ruin had been caused or hurried forward by the dismal degradations of pecuniary difficulties? That was worth inquiring.—I will here mention briefly that I *did* inquire two days after; and in consequence of what I heard. I contrived that a particular service should be tendered to Mr. Coleridge, a week after, through the hands of Mr. Cottle, of Bristol, which might have the effect of liberating his mind a year or two, and thus rendering his great powers disposable to their natural uses. That service was accepted by Coleridge. To save him any feelings of distress all names were concealed; but in a letter written by him, about fifteen years after this time, I found that he had become aware of all the circumstances, perhaps through some indiscretion of Mr. Cottle. A more important question I never ascertained: viz. whether this service had the effect of seriously lightening his mind. For some succeeding years he did certainly appear to me released from that load of despondency which oppressed him on my first introduction. Grave, indeed, he continued to be, and at times absorbed in gloom; nor did I ever see him in a state of perfectly natural cheerfulness. But as he strove in vain, for many years, to wean himself from his captivity to opium, a healthy state of spirits could not be much expected. Perhaps, indeed, where the liver and other organs had, for so large a period in life, been subject to a continual morbid stimulation, it may be impossible for the system ever to recover a natural action. Torpor, I suppose, must result from continued artificial excitement; and perhaps upon a scale of corresponding duration.—Life, in such a case, may not offer a field of sufficient extent for unthreading the fatal links that have been wound about the machinery of health, and have crippled its natural play." * * * *

Anecdote of Mr. Coleridge's Father.—"Dining in a large party one day, the modest divine was suddenly shocked by perceiving some part, as he conceived, of his own snowy shirt emerging from a part of his habiliments, which we shall suppose to have been his waistcoat. It was *not* that; but for decorum we shall so call it. The strayed portion of his supposed tunic was admonished of its errors by a forcible thrust back into its proper home; but still another *limbus* persisted to emerge, or seemed to persist, and still another, until the learned gentleman absolutely perspired with the labor of re-establishing order. And, after all, he saw with anguish, that some arrears of the snowy indecorum still remained to reduce into obedience. To this remnant of rebellion he was proceeding to apply himself—strangely confounded, however, at the obstinacy of the insurrection—when the mistress of the house, rising to lead away the ladies from the table, and all parties naturally rising with her, it became suddenly apparent to every eye, that the worthy Orientalist had been most laboriously stowing away, into the capacious receptacles of his own habiliments, the snowy folds of a lady's gown, belonging to his next neighbor; and so voluminously, that a very small portion of it, indeed, remained for the lady's own use; the natural consequence of which was, of course, that the lady appeared almost inextricably yoked to the learned theologian, and could not in any way effect her release, until after certain operations upon the Vicar's dress, and a continued refunding and rolling out of snowy mazes upon snowy mazes, in quantities which, at length, proved too much for the gravity of the company. Inextinguishable laughter arose from all parties, except the erring and unhappy doctor, who, in dire perplexity, continued still refunding with all his might, until he had paid up the last arrears of his long debt, and thus put an end to a case of distress more memorable to himself and his parishioners than any "*quale-quare-quidditive*" case that had ever perplexed his learning.

"In his childish days, and when he had become an orphan, S. T. Coleridge was removed to the heart of London, and placed on the great foundation of Christ's Hospital. He there found himself associated, as a school-fellow, with several boys destined to distinction in after life, and especially with one, who if not endowed with powers equally large and comprehensive, had, however, genius not less original or exquisite than his own—the inimitable Charles Lamb. But, in learning, Coleridge outstripped all competitors, and rose to be the Captain of the school. It is, indeed, a most memorable fact to be recorded of a boy, that, before completing his fifteenth year, he had translated the Greek Hymns of Sinesius into English Anacreonic verse. This was not a school-task, but a labor of love and choice; to appreciate which, it is necessary to recall the dark philosophy which constitutes the theme of Sinesius. Before leaving school, Coleridge had an opportunity of reading the sonnets of Bowles, which so powerfully impressed his poetic sensibility, that he made forty transcripts of them with his own pen, by way of presents to youthful friends. From Christ's Hospital, by the privilege of his station at school, he was transferred to Jesus College, Cambridge. It was here, no doubt, that his acquaintance began with the philosophic system of Hartley, for that eminent person had been a Jesus man. Frend, also, the mathematician, of heretical memory, belonged to that college, and was probably contemporary with Coleridge. What accident, or imprudence, carried him away from Cambridge before he had completed the usual period of study, or (I believe) taken his degree, I never heard. He had certainly won some distinction as a scholar, having obtained the prize for a Greek ode in Sapphic metre, of which the sentiments (as he observes himself,) were better than the Greek. Porson was accustomed, meanly enough, to ridicule the Greek *lexis* of this ode, which was to break a fly upon the wheel. The ode was clever enough for a boy; but to such skill in Greek as could have enabled him to compose with critical accuracy, Coleridge never made pretensions. He had, however, a far more philosophic insight into much of the structure of that language than Porson had, or could have comprehended. * * *

"Not very long after this, Coldridge became acquainted with the two Wedgwoods, both of whom, admiring his fine powers, subscribed to send him into North Germany, where, at the University of Gottingen, he completed his education according to his own scheme. The most celebrated Professor whose lectures he attended, was the far famed Blumenbach, of whom he continued to speak through life with almost filial reverence.

"Returning to England, he attended Mr. Thomas Wedgwood, as a friend, throughout the afflicting and anomalous illness which brought him to the grave. It was supposed by medical men that the cause of Mr. Wedgwood's continued misery was a stricture of some part in the intestines (the colon, it was believed.) The external symptoms were torpor and defective irritabiliiy, together with everlasting restlessness. By way of some relief to this latter symptom, Mr. Wedgwood purchased a travelling carriage, and wandering up and down England, taking Coleridge as his companion. And, as a desperate attempt to rouse and irritate the decaying sensibilty of his system, I have been assured by a surviving friend, that Mr. Wedgwood at one time opened a butcher's shop, conceiving that the affronts and disputes to which such a situation would expose him, might act beneficially upon his increasing torpor. This strange expedient served only to express the anguish which had now mastered his nature; it was soon abandoned; and this accomplished but miserable man soon sank under his sufferings.—What made the case more memorable was the combination of worldly prosperity which had settled upon this gentleman. He was rich, young, generally beloved, distinguished for his scientific attainments, publicly honored for patriotic services, and had before him, when he first fell ill, every prospect of a splendid and most useful career.

"By the death of Mr. Wedgwood, Coleridges ne-

ceeded to a regular annuity of 75*l.* which that gentleman had bequeathed to him. The other Mr. Wedgwood granted him an equal allowance. Now came his marriage, his connexion with politics and political journals, his residence in various parts of Somersetshire, and his consequent introduction to Mr. Wordsworth."

THE DREAM.

'Twas a dream," exclaimed young Blanch, starting from sleep upon the cold ground, where we bivouaked, on the night before the storming of Badajos. And can man sleep sound, methinks I hear the reader ask, in such circumstances as these? Yes, if the mind and body be as they ought, the soldier on his clay couch on the battle eve, and the sailor cradled on the surge, and rocked by the storm, enjoy a repose which luxury never knew, and which monarchs sigh for in vain.

I was then lying close beside Blanch, but had been awake some time before him; and, by the light of a fire which we had kindled previous to repose, I had been watching the face of the fair boy as it expressed the passing emotions of his mind, when lapsing through the mysterious changes of his dream.

At first, his still pale features exhibited the blessed calm of a pure and peaceful sleep. Anon, they became gently moved, like the moonlight lake by the passing breath of night, and at length were gradually lighted up with a smile so celestial, that I could fancy his spirit was basking in the beams of heaven.

The night-flame played with its wavering glare upon his face, whose beauty thus broke forth in flitful gleams, even as the faces of departed friends come back upon our slumbers in glimpses from the grave.

The sight of the sleeping youth reminded me of that most exquisite of Campbell's lyrics, "The Soldier's Dream." "Happy boy," thought I, "while the young frame is lying on the cold clay, thy spirit hath a sweet respieve from the horrors of war, and, is even now, perchance, far away in thy own land, where the smiles of friends, and the caresses of thy little sister, receive thee back to thy father's halls, where there is joy for thy return, and where thy mother is weeping thy welcome home."

My soliloquy was suddenly broken, for Blanch awakened with a start, and looking round him with a wild and forlorn gaze, sobbed out, "'Twas but a dream."

"It seems to have been a pleasant one, however, if I may judge from the regretful tone of your words on awakening," said I, not without a feeling of curiosity to know in what its happiness consisted.

"It was indeed," rejoined my friend, "but brief as it was blest—so it is soon told. I am now about that age when it is supposed we are most susceptible of the tender passion; yet I never have felt love for woman till this night, when such a Being as seemed wanting to me in the waking world was given to me in sleep. Oh! she was so passing fair, and so seraph-like! Nay, smile not, because it was a dream. I, too, can smile at dreams, but in this instance, the form and features of the unknown were so distinctly delineated, and shadowed forth with such arbitrary truth, as never belonged to the formations of mere fancy, and can never be effaced from my brain. I do believe—nay, I feel certain, that such a being somewhere exists; and to see her with waking eyes, and find favor in her sight, I would willingly lay down my life."

I could not help smiling at this burst of boyish enthusiasm, and at what appeared to me the very mockery of imagination—by which the bewitched Blanch had become enamoured of the phantom of his own brain, and was incurably in love with a lady of a dream; but had I been the most incredulous and cruel interpretor of midnight mysteries, I could not have found in my heart to apply the rule of explaining by contraries these dark hints of the future, and boding ill to poor Blanch, because the vision of a beautiful girl had soothed his slumbers on the eve of storming a city—an event which took place on the following night.

Talk of war—that is, of war in the open field—where man meets man on an equality, where the chances of death are much alike, where valor may avail, and where there is something like fair play—but the storming of strong holds is unmasked murder—and the sack of cities the revelry of the furies. That of Badajos was a festival for fiends. The eternal foe himself—the immortal enemy of man, might have gloated over it, and smiled at his own fair work; and if ever laughter was heard in hell, it was surely on that night of horror.

Bastions and parapets bristled with *chevaux-de-frize* of sharp-pointed irons—bayonets—sword-blades, and every kind of dreadful obstruction, met our troops, as one by one they scaled walls of more than thirty feet high, and in succession were shot, bayoneted, and hurled back into the ditches below.

I have heard it said that Wellington himself appeared much agitated, as by the death-flames which illuminated the horrors of the night, he saw his troops foiled in their desperate and successive efforts against all superhuman obstacles—but that a lightning gleam of triumph flushed over his face, and an exclamation of "Thank God!" escaped him, when an aide-de-camp galloped up with this brief announcement—"My Lord, General Picton is in the castle with a thousand men."

I said he was enabled to see how matters went on by the death lights which illuminated the darkness—for, from beach and bastion, hand-grenades, blazing bombs, and all manner of combustibles, rolled down like a volcano torrent—while a tempest of shot and shell rung through the air, like the rushing of a mighty whirlwind—and when at length an entrance into the town was forced by our troops, over steel-hedged walls, and breaches vomiting floods of fire—mines ready to be sprung yawned beneath their trembling feet, and they swept along through the gloom, amid roaring of cannon, shouts of victory and vengeance, blast of bugles singing the charge, and shriek of the sacked city, all rending the midnight sky, like a chorus from hell.

The work of destruction was nearly over, when I found myself with a party of our men in one of the more retired streets, in passing along which we suddenly encountered some French soldiers in the act of quitting a large and noble-looking mansion, where the love of plunder had induced them to linger too long—for in an instant they were bayoneted by our troops against the walls. It was then that thinking I heard moaning within, I entered the house—a large but dimly lighted apartment lay before me into which I advanced, and by the flame of the glimering lamp, beheld the body of a young lady stretched upon the floor, and that of a British officer extended by her side.

Approaching and holding the lamp to the face of the former I looked upon a creature lovely in death although her features bore the expression of recent agony; and her hair all clotted with blood, streamed down over her bosom, from which the warn current of her heart had gushed through a ghastly wound.

I then turned the lamp to the face of the officer, in whom, with a start of horror, I recognized my poor friend Blanch, steeped in blood, and though he still breathed, it was evident his wounds were mortal, and that his end was near.

In a short time, however, he opened his eyes, and gazing on my face, held out his hand in token of recognition. The only restorative which I had about me was a little brandy in a flask, which I applied to his lips, and in a few minutes he rallied so much as to be able to speak and thank me; and with his dying breath to explain the circumstances in which I found him. They were to the following effect:

After an entrance into the town had been effected, in rushing along the streets with a party of his regiment during the confusion of the scene and the darkness of the night, Blanch was separated from them, and after a long and fruitless search, found himself at the door of the house in which we then were. Hearing a noise within, he suspected that some of our soldiers might be plundering; with the view of preventing which, he entered, at the hazard of his life, and had just reached the room where he then lay, when a door at the opposite end of it flew open, and in breathless terror, as if flying from pursuit, a young Spanish lady rushed into the room. Upon seeing the stranger she made a sudden pause, during which, with mute amazement, he recognized in the fair girl before him, the living form of her whose shadowy similitude had appeared in his slumbers on the preceding night; but tenfold was that amazement increased, when, ere he could speak, she exclaimed, with wild energy, "Mysterious heaven! It is he—'tis he himself!—the very being of my dream, who appeared to me last night, and is now come to take me away from the horrors of this dreadful place!"

At that moment, and before he could reply, a party of the enemy who had been searching the house in quest of pillage, burst into the room, and the sight of a British officer on such an occasion, so exasperated the marauders, that setting up a savage yell, they flew upon him with their bayonets, and the poor Spanish girl, who threw herself between them and their victim, received her death-wound at the same moment with him she tried to save.

Blanch could say no more—his tale was told, and his life was fast ebbing away—his speech faltered—his voice sunk into a whisper, and the signs of death were upon him. He motioned me to raise his head, which I had no sooner done than his eyes began to fix in the death glaze, and drawing in his breath for the last time, with a deep long sigh he expired.

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TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER a 20

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 9d, 1833.

For further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

Unprecedented Despatch.—The brig Cayuga, Capt. William Frisbie, of 246 tons and rising 2000 barrels burthen, which was launched from the ship yard on Wednesday afternoon last, is now completely fitted and equipped for sea, with a full cargo on board, cleared at the Custom House, and bound on a voyage to Europe—all in the short space of six days, including Sunday and one rainy day, making in reality but four working days.—[Boston Patriot.]

A CHANCE FOR MEN "SWIFT OF FOOT."—Mr. *John C. Stevens*, of this city, in order to make good an opinion publicly expressed, that what in the way of pedestrian feats has been done in England could also be done here, and under the impression that *ten miles* have actually been accomplished within the hour in England, makes the following proposition in the Courier and Enquirer of this morning:

I will give $500 to the first, $300 to the second, and $200 to him who shall be third in accomplishing the distance, (10 miles in the hour,) on the day selected for the trial. If but one should start, he shall be entitled to the whole $1,000, provided he does it within the hour. In order that those at a distance may have time to prepare for such a performance, I have selected the last ten days of April next, on some one of which, to make the trial.

The competitors may be "white, red or black, or of any intermediate color."

CHOICE WINES, &c.

THE subscriber offers for sale, a large assortment of Wines consisting of

MADEIRA—In pipes, hhds. and quarter casks, of different qualities and brands, part received direct, and part via East Indies. superior old L. P. in hhds. quarter casks, and half quarters.

Also—in cases of 1, 2 and 3 dozen each, old and choice.

SHERRY WINE—Pale and brown, in wood and glass, of different qualities, from 14s to 36s part of it imported by order.

PORT WINE—In hhds. and quarter casks. Also, in cases of 1 and 2 dozen each.

HOCK WINE—A large assortment, of various brands, qualities and vintages, in cases and hampers, some very old.

FRENCH WINES.—Sparkling Champaign, of all the favorite brands, quarts and pints, with and without wax on the corks. Also, Pink Champaign.

Sauterne, Vin de Grave, Burgundy, Moselle and Muscat.

Bordeaux Claret, Lafitte. Chenteax Margeaux, Leoville, St. Etephe.

Low priced, in boxes and casks.

Marseilles Madeira, in quarter casks and Indian barrels.

Canary, Malmsey and Teneriffe, &c. &c.

BOTTLES.—Wine, Porter and Claret, in hampers, one gross each. Demijohns.

HIBBERT'S PORTER.—London Porter, Brown Stout, and Pale Ale, in casks of 7 dozen quarts, and 8 do. pints.

SCOTCH ALE.—Younger & Co's Pale Ale, qts. and pints.

SALLAD OIL—Bordeaux and Marseilles, in boxes and baskets. Olives, Capers and Anchovies.

FRUIT—Bunch and Muscatel Raisins, E. I. Preserves and and Canton Ginger.

COFFEE, &c.—Old Java and Manilla, Souchong Tea, Refined White Sugars, &c.

Part of the above are entitled to debenture, and will be sold in lots to suit purchasers. Orders received, and forwarded as directed.

ROBERT GRACIE,
O17 90 Broad sreet.

UTICA AND SCHENECTADY RAILROAD COMPANY.

PROPOSALS will be received until the last Monday of October next, at 12 o'clock at noon—

For grading about sixty-five miles of the Utica and Schenectady Railroad, between the Sand Ridge on Sanders' Flats in Schenectady, and the western boundary line of the town of Herkimer;

For the masonry within those limits, embracing the culverts, and the abutments and piers of the repective bridges; and

For the wooden superstructure of bridges across the Cayadutta Creek at Caughnawaga, the Garoga Creek at Palatine Church, the East Canada Creek at Manheim, the Gulph at Little Falls, and the West Canada Creek at Herkimer.

The line will be divided into sections of about one mile each, and prepared for examination, and maps, profiles and plans deposited for inspection with W. C. Young, the chief engineer, at Schenectady, ten days previous to the time above mentioned.

Blank forms of proposals will be furnished at an early day at the company's offices at Schenectady, Palatine, Little Falls and Utica.

The names of persons to whom contracts are awarded (who will not be permitted to sub-contract the same) will be made known, at Schenectady on the 29th day of October, when it will be required that the grading proceed without delay, wherever, and soon as titles to the lands are acquired by the company; that the culverts and small bridges be completed by the first of August next; that the residue of the masonry and the large bridges be finished by the 1st of October thereafter; and that the grading be completed during the year 1835. Contractors to furnish security for the faithful performance of their contracts.

The use of ardent spirits to be prohibited in constructing the road.

Proposals, post paid, to be endorsed "Proposals," and containing the names of the persons offered as securities, to be addressed to the undersigned at Schenectady, or deposited at the company's office at that place. September 4, 1834.

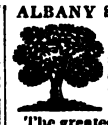
G. M. DAVISON, Commissioner
s-17 to27 Utica and Schenectady Railroad Company.

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 94 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by
a18 tf D. K. MINOR & J. E. CHALLIS.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better ustice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—NEW YORK FARMER and American Gardener's Magazine; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany*. tf

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
m1 1y Germant. and Norrist. Railroad

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street,
New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J 5 tf

RAILROAD CAR WHEELS AND BOXES,
AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,
Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

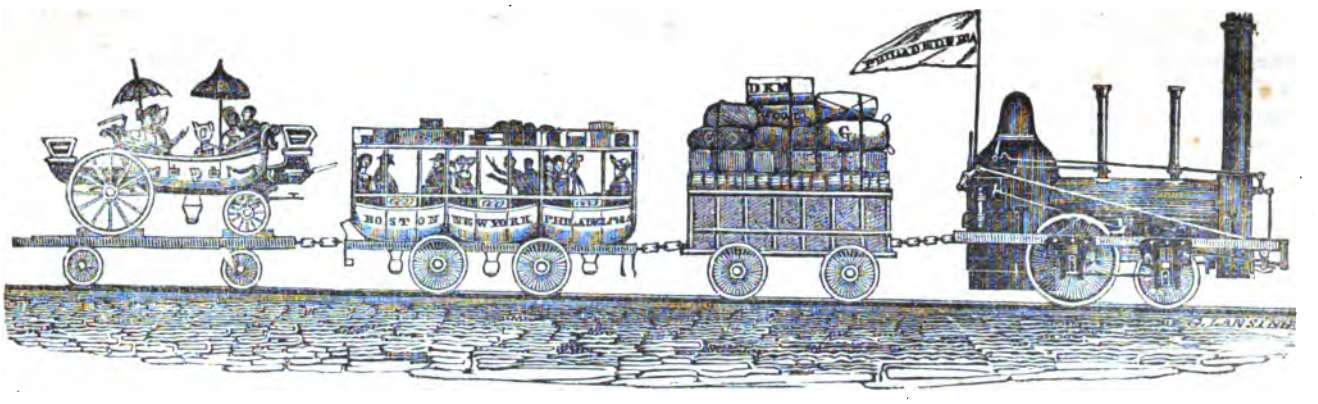
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy submit them, upon application, to any person desirous of perusing the same. m24



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, OCTOBER 25, 1834. [VOLUME III.—No. 42.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, OCTOBER 25, 1834.

To our friend in Utica, we would express our acknowledgements for the communication of his friend in relation to steam carriages on common roads. It comes quite apropos to the pamphlet of Mr. Mills, which we finished last week; and as it affords a better reply to his numerous arguments, (for the reason of its high authority, Mr. Perkins,) we have concluded to dispense with the humble dissertation on the subject we had ourselves prepared.

We are gratified to learn that the Directors of the New-Jersey Railroad and Transportation Company and Paterson Railroad Company have concluded an agreement which will enable the latter Company to place their cars on the whole line to Jersey City in the course of a few days.

Gleanings from English Magazines.

The Stockton and Darlington Railway, which was the first opened in this country for general traffic, has actually multiplied the intercourse between these two towns *forty-fold*.

The shares of the Stockton and Darlington Railway represent 106*l.* paid on each; they are now selling at 299*l.* 10*s.* each. The dividends of the Liverpool and Manchester Railway are limited by Act of Parliament to 10 per cent. (in consequence of the opposition of the great canal interests, against which it had to struggle for existence,) but notwithstanding this the 100*l.* shares are now quoted at 200*l.*

The Liverpool and Manchester Railway conveys now, on an average, about 1,200 passengers daily; which is *triple* the number ever conveyed on the common road during the best days of the coaching system. The quantity of goods transported on this railway has also been constantly on the increase, and falls now little short of 200,000 tons per annum, though it has had to contend in this branch of its business with an unusually strong canal opposition.

That the value of property of every description in the vicinity of railways should have risen amazingly since their establishment, ceases under these circumstances to be matter of surprise. In the course of the evidence adduced before the House of Lords on the London and Birmingham Railway Bill, it was shown that almost immediately after the opening of the Liverpool and Manchester line, the value of the land adjacent to it had risen generally 50 per cent.; and that portions of ground at both extremities, similar to what the Railway Company had purchased for three pence per square yard, could not now be had for less than from three shillings to four shillings per yard, being an advance of full 1,400 per cent.!

From the same evidence it appeared that the Liverpool and Manchester Railway pays on an average one-fifth of the poor rates of all the parishes through which it passes.

Between Stockton and Darlington, the charges for carrying goods and passengers have been reduced more than one-half; between Liverpool and Manchester, about one-third.

On the Canturbury and Whitstable Railway—a bad line on a bad plan—the traffic has been increased nearly *eight-fold* within the short period of three years.

The last returns from the Edinburgh and Dalkeith Railway exhibit, in one brief year, an increase of nearly 100 per cent. in the number of passengers, and about 30 per cent. in goods. For 1832, the numbers were—Passengers, 91,814; goods, 61,000 tons. For 1833—Passengers, 160,000; 80,000 tons.

Parisian Steam Carriage.—Last week, Messrs. Dietz & Hermann made an experimental trip with a steam carriage of their construction on the road to Vincennes from Paris. This machine, carrying twenty persons, ran from the Barriere du Trone to the Castle of Vincennes, a distance of three quarters of a league, in 11 minutes. It afterwards took an omnibus in tow, in which, and upon the machine itself, there were 48 passengers, and went at the rate of three leagues an hour as far as Nugent. On its return, near the Castle of Vincennes, a tube burst, but it was quickly repaired, and the machine with the omnibus attached to it, and both laden with 53 passengers, reached the Haymarket, Faubourg St. Antoine, in 12 minutes.

Use of Hot Water at Wallington, the seat of Sir John Trevelyan, in Northumberland—90 loads of coals, out of 220, were saved the first year. The value of these coals, including carriage, is about 6s. a ton. Instead of nine fires to four houses, there are now only two fires. The level system of circulating the water is adopted, and the work was executed by Mr. Cookson, iron-founder, of Newcastle.—[T. July 8, 1834.]

[*Correspondence of the Journal of Commerce.*]

Spottsylvania Co., (Va.,) Oct. 4th, 1834.

Having spent some time in the rich copper region of the Blue Ridge, I returned on the 4th, to the Gold mines of the United States Company in Spotsylvania Co. Here I found the miners engaged in raising ore from the shaft. As soon as the ore came into daylight, gold was distinctly seen on many of the rocks; and on beating them promiscuously into sand, and washing away the lighter particles, the result of pure metallic gold was still more beautiful and surprizing. I descended into the shaft about 30 feet, and after passing along in a tunnel 100 feet, I came to the vein, which, by admeasurement, was found to be 21 inches in diameter, and dipping at an angle of about 60 degrees. I send you a common specimen of the vein, which was broken down in my presence, and which, if skilfully examined, will be found to contain from $40 to $50 per hundred weight or bushel. The whole expense of raising and working this ore is from 60 to 65 cents per hundred weight or bushel.—This Company is now fully organized, and in full operation, under a charter granted by the legislature of Virginia, Jan. 9, 1834. Their mining operations appear to be conducted with economy and skill, by Capt. Rau, an experienced German miner. The excellent water power, abundance of wood and timber upon their own lands, together with the richness of their ore, render the prospects of this Company uncommonly promising.

Separated only by the Rappahannock River are the Rappahannock Gold Mines, under the direction of Professor John Millington. These mines are the property of a Company in Philadelphia, and although not so extensive as those of the United States Company, still their ores are found to be rich in gold, and well worth working; as may be seen from the following extract of Mr. Millington's Report. "It may therefore be fairly inferred that if the experiment had been better and more accurately conducted, and made on a larger scale, each pound weight of average ore would have yielded one grain of gold, or at the rate of five pennyweights to the hundred pounds weight of ore, which is much more than the probable, or indeed possible cost of working the mines,—as we conceive that could in no case amount to so much as one dollar upon the hundred pounds weight."

I remain yours very respectfully,

F. Shepherd.

Steam Carriages on Common Roads.

UTICA, N. Y., Sept. 26, 1834.

To the Editor of the Railroad Journal:

DEAR SIR,—I take the liberty of sending you for publication, if you think proper, in the Railroad Journal, an extract from a letter just received from a friend in Europe, communicating information upon the important subjects of the explosion of steam boilers and the application of steam to locomotion on common roads. The remarks of the writer are deserving of the more attention, as they are subjects with which he is practically acquainted, and to which for the last few years he has devoted much study and observation. His interview with Mr. Perkins will be read with interest, not only from the high reputation which Mr. P. has acquired as an artist, but from the general success of his labors, in developing the powers and properties of steam, and in various other improvements in science and the arts.

With respect, yours, truly, E. F. J.

"PARIS, August 2, 1834.

* * * * * * *

"I made considerable inquiry (as you requested) with regard to the application of steam carriages to common roads while in England, but regret that I am not able to give you as favorable an account of the late improvements as you may possibly anticipate.

"You have probably seen the statement published in the London Times some months since, that a carriage, in operation near there, had passed the Royal Mail while ascending at full speed a hill of considerable elevation, and that it had travelled at the rate of 24 miles per hour on a level. You must not, however, conclude that the use of steam is driving the horses from the English turnpikes. The arbitrary coachman has not yet been compelled to abdicate his throne in favor of the more skilful engineer, who has been trained to load a safety valve in lieu of the cockney accomplishment of guiding by the rein or cracking the whip.

"The great weight which, notwithstanding the numerous improvements, is still found indispensable to an engine and boiler of any considerable power, renders it almost impossible to mount it upon wheels, and continue it in rapid motion for any length of time, on as irregular a surface as that of a common road, without serious injury. It must be considered likewise that the effect produced by a given power is small, compared with that upon a well constructed railway, owing to the greater resistance to be overcome, arising from the irregularity of the surface above mentioned.

"Mr. Church's patent steam carriage, constructed to ply between Birmingham and London, is one of the lightest in proportion to its strength, and I think of the best arrangement of any that I had an opportunity of seeing It has two oscillating cylinders of 50 horse power each, and a small extra engine for supplying the boiler with water when the carriage is at rest. The whole machine weighs four tons, and performs admirably for a short distance, but is subject to the difficulty I have already mentioned. *It is now, like all the others, laid up for repair.*

"Mr. Ericsson (of whom you speak) has not as yet been able, I believe, to prove by actual experiment the advantages of his boiler for using air instead of water for generating power. I sent you from London a number of the Repertory, containing the specification of his patent, and I have not learned that he has made any important improvement since.

"There is a great difference of opinion with regard to the ultimate success of steam carriages among the knowing ones England. Mr. Church is very confident of success, and is expending very large sums in experimenting, while Mr. Perkins is of a different opinion. He thinks that very great improvements must yet be made, not only in the boiler, but in the engine, before steam carriages can be applied with any advantage to common roads. He is now experimenting on a rotary steam engine invented by some lord, whose name I have forgotten, which he wishes to apply to the railroad carriage. You know what my views have been on the application of the rotary engine to locomotion for some time past. Pardon my vanity, but I do think the model I showed you some years since is much less liable to friction, and I know less complicated than his lordship's. The latter moves, however, under the hand of Mr. Perkins, but whether it will economize steam the most, is another question.

"Speaking of Mr. Perkins reminds me of a conversation I had with him a few days before leaving London, on the subject of steam boilers and explosions. He agrees with me in opinion that the theory of collapses is false, and that explosions only occur from the application of too great a pressure, (caused either by too great a reduction of water in the boiler, or by not using the steam as rapidly as it should be,) or from the combustion of a mixture of hydrogen and oxygen gases. He told me that he was perfectly convinced, from recent experiments, that if explosions did occur in the use of his high pressure boiler from the first two causes, no serious consequences would ensue. As a proof of this assertion, he produced several fragments of a boiler, which had been attached to his steam-gun, and which had exploded several times at a pressure of from 400 lbs. to 600 lbs. to the square inch, without injury to the engineer or any of the attendants, or without deranging any part of the machine, except the particular flue, or rather cylinder or tube, that gave way, and which in every case was repaired in one night and ready for action again the next morning.

"He also thinks he has discovered how the oxygen is supplied, which, combined with hydrogen, has produced, beyond a doubt, so many dreadful explosions of the low pressure boilers in our country. You are aware that the disbelievers in the theory of explosions by the combination of gases have founded their faith on the impossibility that any oxygen gas should exist in the boiler. They say that it is impossible for it to find its way there against the pressure of the steam, and that although hydrogen might be formed by the decomposition of the water, yet oxygen could not be. Mr. P. perfectly explains it. It is supplied by the force pump, which, in almost all the American steamboats, is constructed in such a manner as to force in air when it is no longer able to supply water. The water being low, the iron is exposed to the action of the fire, soon becomes red hot, throws off hydrogen, and when a certain quantity of each is produced, the boiler is as certain to explode, as though, when thus heated, it were filled with gunpowder. This, too, explains the reason why the number of explosions in England are so few in proportion to those in the United States. It is not because they have more skilful engineers, or that they are more careful, but because their force pumps are immersed, almost universally, in water, (not from design, but by accident.) They therefore cannot force air into the boiler, although they may not supply it with water. The subject certainly deserves attention. If by using a boiler like that of Mr. Perkins', the risk of life occasioned by the ordinary explosions can be greatly or entirely diminished, and if, by immersing the force pump in water, the explosion of gases can be entirely prevented, the experiment should be fairly and fully tried.

"I intended to have given you, as well as I was able, a description of the Galley of Practical Arts, in which Mr. P.'s steam gun is placed, which discharges 36 balls per second, and where his press is deposited, with which he compresses water one-twelfth of its bulk. I wished also to speak of his late discovery of making ice at 4 cents per lb., by which he is enabled to produce it at sea to supply the place of fresh water, and to undersell the Boston merchant who ships it to the south, but must defer it to another opportunity, and will close by saying that I leave here to-day in a small paid Diligence, with the prospect of being stopped to show my pasport every few miles: the police being particularly strict since Don Carlos passed them so rapidly the other day.

"Yours, as ever, W———."

To the Editor of the New York American.

I have been much interested in the facts detailed in the enclosed letter, which I received a few days since, from the Engineer who has charge of a new locomotive Steam Engine, which has been at work for three or four months on the Lancaster, Pa. Railroad.

Considering that the engine has the adhesion of but one pair of wheels, and the proportionally small amount of weight on those wheels, for the work done; together with the length of time she has been at work without the loss of a day, on a road so unfavorable for steam power; I believe the performance is unequalled in the history of the locomotive engine; and presume its publication may interest some of your readers.

Should your opinion coincide with my own in this respect, you are at liberty to publish it in your paper. I am, very respectfully, your obedient servant.

E. L. MILLER.

New York, October 17th, 1834.

Lancaster, September 30th, 1834.

DEAR SIR:—The following statement, I believe, comprises most of the facts you requested relative to the performance of the locomotive Steam Engine, of which I have charge, and now at work on the Pennsylvania State Road.

Knowing the interest you feel in the merits of these facts, I have thought it best to communicate to you the character of the road; which is one of the most unfavorable in the country, for the locomotive Engine, having been originally located for horse power only.

From Philadelphia to Lancaster, a distance of 70 miles, the whole surface of it is very undulating.—Some of the ascents are 45 feet per mile, and the average range is near 30 feet per mile, in addition to which, curves of from 450 feet, to 850 feet radius, frequently occur in the worst ascents.—Indeed, the road is almost made up of curves, so much so, that the engine is frequently entering a curve to the right, while her train is yet coming out of a curve to the left 1 3-4 miles being the longest continued straight line, in the whole 70 miles. The Engine with the exception of the wheels is a duplicate of the engine called the "E. L. Miller," constructed for you by Mr. Baldwin, of Philadelphia, for the Charleston Road, and I think, considering the character of this road, performs equally well. She has now been in operation more than three months, and has deen mostly employed in conveying iron for the road; running to Lancaster, 70 miles one day, and returning the next, with promiscuous freight.—Her usual load of freight is 35 tons.

In one instance she carried up 14 cars, with 40 tons of iron, and an extra car load of wood, making with the tender 16 cars; a gross weight, including engine, of about 75 tons. The cars are those first built for the road, without springs, and in very bad order: average speed, with these loads, twelve to fourteen miles per hour.

As yet, she has not lost a day, and has needed very little repairs. She blows off steam at the top of the 45 feet grades, after ascending them with the heaviest loads; and has less than 700 lbs. on her heaviest or driving wheels.

Your plan of increasing the adhesion of the driving wheels, answers perfectly; indeed we could not get along on our heaviest grades without it. Instead of the levers on the Charleston engine, we use the screw on *this*, which is more convenient; and with good cars, and the rail in good order, we have no doubt of being able to carry 50 tons of freight up our 45 feet grades. Respectfully yours, E. C. WHITING.

E. L. MILLER, Esq. New-York.

P. S.—I understand that the commissioners of this road have contracted with Mr. Baldwin for as many engines of this kind, as he can construct for several months. About three weeks since, he put in operation on this road, a second engine of the same kind, which works finely. He has a third engine for the Trenton road, ready to put in operation next week; and two more for this road in his shop well under way. Yours as above, E. C. W.

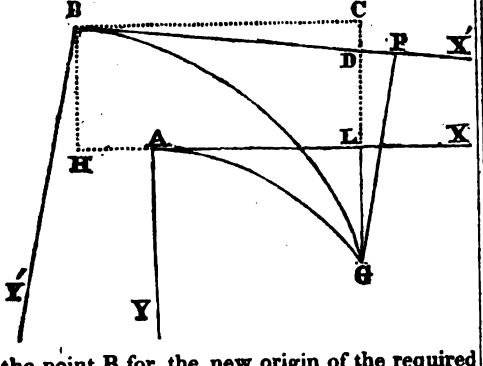
On the Location of Railroad Curvatures; being an Investigation of all the Principal Formulas which are required for Field Operations, in laying Curves and Tangent Lines, to pass through Given Points. By J. S. Van De Graaff. Continued from page 644.

[For the American Railroad Journal.]

21. If the point designated for the required curve to meet does not coincide with the extremity of the *n*th chain in the given curve, as in the last article it is supposed, but varies a small distance to the right or left, yet, *if the curves are long*, the best method will always be to compute the value of T′ as though the curve sought were intended to pass through the point contemplated in (XIX.); and then the requisite small variation in the computed value of T′, to meet the case proposed, may be subsequently determined by very simple methods, to be hereafter explained.

22. Let two curves be under consideration having different origins, and tangent lines; and let one of those curves be given, and a point designated therein, through which the other curve is required to pass. Take a system of rectangular co-ordinate axes, corresponding with the given origin, and tangent line, of the given curve, and let the co-ordinates of that point which is designated for the required curve to meet, be x, y; the value of these co-ordinates being computed by means of (VII.) if the given curve be already laid in the field, but determined by means of a system of rectangular lines when that curve has not been actually laid. Let the co-ordinates of the *new origin*, taken with reference to the axes of x, y, and determined either by computation or by means of a system of rectangular lines, be denoted by $\propto$ β; $\propto$ *being supposed to coincide with the axis of* x. And lastly, take z to denote the given inclination of the tangents at the origins of the two curves. From those data it is then proposed to find the modulus of curvature of the required curve, such that it may pass through the designated point.

Take a new system of rectangular co-ordinate axes, corresponding with the origin and tangent line of the required curve; and agreeably to these, let x', y', represent the new co-ordinates of the point designated in the given curve. It is then very obvious that the required modulus of curvature will be immediately derived from (XI.), when the new co-ordinates x', y', become known. The value of those co-ordinates must therefore be sought agreeably to the known methods of analytical geometry, for the transformation of co-ordinates. Let A be the origin, and G the designated point, in the given curve AG; and take



the point B for the new origin of the required curve BG, and AX, AY, and BX′, BY′, for the two given systems of rectangular co-ordinate axes; the two tangent lines coinciding with AX and BX′ respectively. Let such lines be drawn as appear obvious upon the figure, and the following values will then obtain: $x = AL$, $y = LG$, $\propto = AH$, $\beta = HB$, $x' = BP$, $y' = PG$, and $z = \angle CBD = \angle LGP$.

By plane trigonometry $CD = \overline{x + \propto}$. Tan. z; and consequeutly $DG = y + \beta - \overline{x + \propto}$. Tan. z; but again by plane trigonometry, $PG = DG$. Cos. z. Hence, $PG = \overline{y + \beta}$. Cos. $z - \overline{x + \propto}$. Sin z. In like manner it will be found that $BP = \overline{y + \beta}$. Sin. $z + \overline{x + \propto}$. Cos. z. The values of the new co-ordinates will therefore be expressed as follows:

$$x' = \overline{y + \beta}. \text{ Sin. } z + \overline{x + \propto}. \text{ Cos. } z$$

$$y' = \overline{y + \beta}. \text{ Cos. } z - \overline{x + \propto}. \text{ Sin. } z. \quad \text{(XXI.)}$$

Such are the formulas to be used in the field, when a new system of co-ordinates must be computed; they are the well known expressions given by most authors for the transformation of rectangular co-ordinates, and they only here stand transposed in such a manner as will best suit the engineer's purpose in the present inquiry.

It may be observed, that the value of the angle z need never be obtained by a measurement with the instrument; for it may always be easily computed from the manner in which the two origins, at A and B, have been obtained.

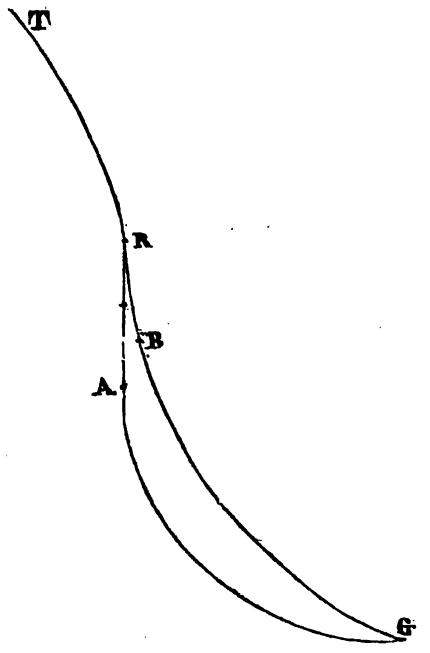
The value of the new co-ordinates having been found, the required modulus of curvature may be easily computed by means of (XI.) as before remarked. But a direct formula will be more convenient for use; and in order to obtain such a formula, let each of (XXI.) be squared, and the result will give $x'^2 + y'^2 = \overline{y + \beta}|^2 + \overline{x + \propto}|^2$. Hence denoting the required modulus of curvature by T′, the following formula will be immediately derived from (XI.)

$$\text{Sin. } T' = \frac{\overline{y + \beta}. \text{ Cos. } z - \overline{x + \propto} \text{ Sin. } z}{\overline{y + \beta}|^2 + \overline{x + \propto}|^2}; \quad \text{(XXII.)}$$

The theorem thus obtained, expressing the value of T′, has a very good form for numerical computations, and when skillfully applied, it will frequently save much labor in the field, which would be otherwise required when *certain alterations* are proposed in a line *once computed, or accurately traced*. And although the co-ordinates $\propto$, β, and the angle z, which expresses the inclination of the axis of x, and of x', to each other, will change their *signs* under different circumstances in the field, yet, to those who are familiar with the use of algebraic formulas, this cannot be a source of any embarrassment. For it has only to be observed that the hypothesis here assumed is, that $\propto$ is accounted *positive* when its direction is immediately *opposite* to the direction of x; and β is, in like manner, accounted *positive* when its direction is immediately *opposite* to the direction of y. And either $\propto$ or β must, in consequence, have its sign *reversed* in (XXI.) or (XXII.), when the circumstances in the field are such as to give either of them the same direction with its respective co-ordinate axis.

The angle z is to be accounted negative, or which is the same thing, the quantity Sin. z must have its sign *reversed*,* in the two following cases: I. When β is positive, and the two tangents diverge *in advance*. II. When β is negative, and the two tangents converge *in advance*. In all other cases the formulas (XXI.) and (XXII.) will retain their present forms, as far as the angle z is concerned.

In order to show *one* case in which an application of (XXII.) will be extremely convenient in practice, let TRS be a curve already laid in the field upon *such ground as ought to be selected*, and let SA be a *short* tangent intervening between the given curve TRS, and a certain reversed curve AG, necessary to pass a designated point G. Having traced a system of rectangular lines from the given origin A, and terminating in the designated point G, let the modulus of curvature be computed by means of (XI.) which would trace the curve AG, and let the direction of that curve, at the point G, be examined agreeably to the method explained in Article 16. Now, supposing this curvature is found more abrupt than is thought to be judicious, the only method of alteration will be to take the curve TRS off into a tangent a little sooner, as for instance at the station R, and



then a new origin will be obtained at B, in the new tangent RB, for the required curve BG, which is the very case under consideration in the present article. The inclination of the two tangents RB and SA, will be known at once from (IV.); and the co-ordinates of the new origin B may be easily computed by methods to be hereafter explained. By repeating a calculation from (XXII.) for several points in the given curve TRS, it will be easy to select a proper point R, at which to terminate the given curve TR, in order to lay a short tangent RB in such a position as to meet the necessary conditions imposed by the reversed curve BG. Other cases will be hereafter mentioned, in which an application of (XXII.) will be required; but, in the first place, the following examples are here given, amply to illustrate the *various mutations of that formula, under the different circumstances occurring in practice*.

Example 1. Let figures 1 and 2 exhibit the relative positions of the origins and tangent lines in two *different instances* occurring in the field; A being the primitive origin in both

Fig. 1.

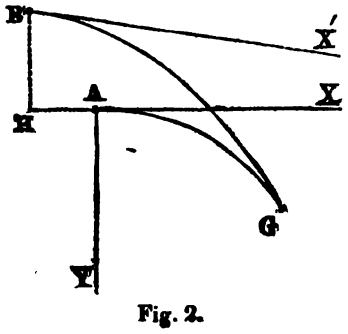
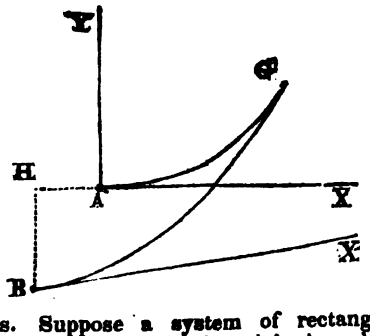


Fig. 2.



figures. Suppose a system of rectangular lines to be traced from the origin A, and terminating in the designated point G, and let the resulting equations give, $x = 17$ chains, $y = 12$ chains, agreeably to the principles explained in Art. 16. Take also the co-ordinates AH

* *Note.*—Agreeably to the principles of trigonometry, when an arc becomes *negative*, the Sine becomes negative also; but the Cosine does not change its sign.

and HB, of the *new origin*, equal to 3 and 2 chains respectively, and let the inclination of the new tangent BX′ be 10°, *converging* in advance.

In this case, either figure being under consideration in the field, the following values will obtain, viz.: $\propto = +3$, $\beta = +2$, and $z = +10°$. Hence,

$$\text{Sin. } T' = \frac{\overline{12+2} \cdot \text{Cos. } 10° - \overline{17+3} \cdot \text{Sin } 10°}{\overline{12+2|}^2 + \overline{17+3|}^2}$$

$$= \frac{14 \cdot \text{Cos. } 10° - 20 \cdot \text{Sin. } 10°}{196 + 400} =$$

$$\frac{14 \times \cdot 98481 - 20 \times \cdot 17365}{596} =$$

$$\frac{13{\cdot}787734 - 3{\cdot}47300}{596} = \frac{10.31434}{596}$$

$= {\cdot}01731$; or, $T' = 0°\ 59\frac{1}{2}' =$ modulus of curvature necessary to trace a curve from the *new origin* B to the designated point G.

Example 2. Let the relative positions of the *origins* in two other instances be the same as in figures example 1; and suppose the two tangents to *diverge* in advance.

Here, retaining the same quantities given in the first example, the signs which appertain equally to fig. 1 and fig. 2, are the following, viz.: $\propto + 3$, $\beta = +2$, and $z = -10°$. And, therefore, in this case,

$$\text{Sin. } T' = \frac{\overline{12+2} \cdot \text{Cos. } 10° + \overline{17+3} \cdot \text{Sin. } 10°}{\overline{12+2|}^2 + \overline{17+3|}^2}$$

$$= \frac{13{\cdot}78734 + 3.47300}{596} = \frac{17{\cdot}26034}{596} = {\cdot}02896;$$

or, $T' = 1°\ 39\frac{1}{2}' =$ modulus of curvature required.

Agricultural Pulverizer; B. F. Stickney, Vistula, Monroe County, Michigan Territory, March 1.—There is a striking resemblance between this machine and that patented by Mr. Jas. D. Woodside, on the 28th of July, 1832: the main difference being in making the part which is to pulverise the ground in the form of cultivator teeth, and allowing them to fall back by means of a hinge joint close to the roller, whilst in Mr. Woodside's machine thay are permanent teeth, or spikes. The roller around which the cutters, or hoes, are fixed, receives its motion by gearing from wheels which roll upon the ground, and there is a lever to raise or depress the roller as in the former machine. It is also proposed to place spikes or pins on the faces of the wheels which run upon the ground, should the friction not be sufficient to drive the roller with its cutters. There is no claim made.

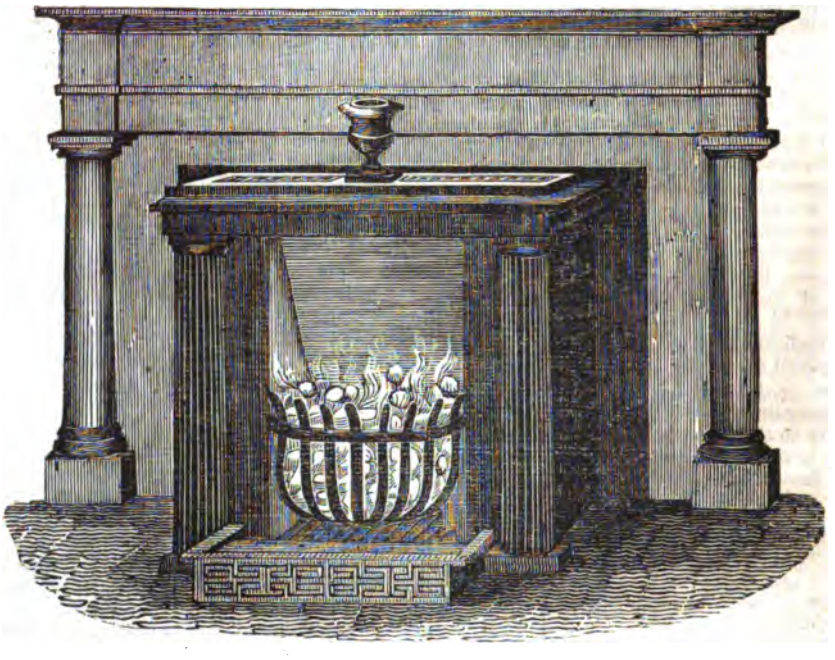
We have alluded to Mr. Woodside's patent, but find that our notice of it was accidentally omitted in its proper place; but as this instrument is now coming into use, we design, at an early day, to place the specification of it, with a cut, before our readers.—[Journal of Franklin Institute.]

Mill for Cracking or Grinding Corn or other Grain; Benjamin Hinkley, Fayette, Kennebeck county, Maine, March 10.—The corn to be broken is put into a hopper having a longitudinal slot in the bottom of it, against which revolves a steel roller, about two and a half inches in diameter, and twelve inches long; the face of this roller is cut like a rasp or grater. A flat plate of wrought iron stands along the cylinder, their distance apart being adjusted by screws; and between these the grain descends when the roller is turned. To give the proper motion there is a cog wheel, pinion, and fly wheel, fixed in the usual manner. The claim is to "the particular form of the solid steel cylinder shaft, and the indented, or rasping, surface made upon the grinding part of the same; and the flat surface of iron, and the manner of screwing and gauging the same to and from the cylinder."

The similarity between this machine and that of Webber Furbish, will be apparent to any one.—[Ib.]

Wheels for Carriages of all kinds; Henry Beebe, Haverstraw, Rockland county, New-York, March 12.—This wheel is to be made with a rim and spokes of wrought iron, and a hub of cast iron. The rim for a four feet six wheel, it is proposed to make of iron five-sixteenths thick, and one and three-eighths wide. After this is formed into a hoop, holes are to be bored in it to correspond with the number and size of the spokes; these latter are tapped and have nuts on their outer ends, the screw slides freely within the holes in the rim, which are smooth. When the hub is to be cast, it is moulded in such a way that the bore to receive the axle may have an enlarged opening in the centre, for the sake of lightness, and to contain oil, &c. The spokes, surrounded by the rim, are laid in the flask, so that the cast metal shall embrace their inner ends. When cast, the wheel is placed upon an axle and turned round, to try if the rim is true; to make it so, the nuts are tightened up against it, and when true, the projecting ends of the spokes are removed and heated tire put on. The claim is to "the whole of the machine, or wheel, above described, when taken together, and the mode and manner of constructing the same, particularly the principle of constructing the hub upon the iron or steel spokes. But no claim is made for the mode of making the hub, the spoke, the rim, or the tire, or any of the parts of this machine, or wheel, taken separately." The hubs of wheels have often been cast upon wrought iron spokes; it would seem, therefore that the *particular principle* claimed is not new. We doubt the goodness of the whole wheel, and particularly the durability of the connexion between the cast iron hub and wrought iron spokes.—[Ib.]

Extricating Horses from Carriages: O. R. Broyles, Anderson Court House, Pendleton District, South Carolina, March 17.—In this apparatus the windlasses to which the leathers of the swingletrees are attached are made capable of revolving, so as to present their reversed sides to the horses, and so constructed as the swingletrees will, in that case, be detached, and the horses liberated. They are ordinarily held in their places by two levers, connected together by a rope at their extreme ends, but according to the present mode their connection is destroyed, and the horses freed by pulling a line which passes from them to the carriage. The plan appears to be relied on as altogether new, no claim being made to any part of it. The particular arrangement described may probably be original, but there are others bearing some analogy to it, equally simple, and operating equally well, which have been introduced, but have never gone into extended use. The fact is, that whilst we laugh at the sailor who objects to a cork jacket, or other life-preserver, because he is apprehensive that it may invite the catastrophe against which it is to guard, most of us neglect those precautions that are intended to protect us against *possible* danger only.—[Ib.]



The Doric Fire-Place for burning Anthracite or Bituminous Coal.

We have seen a contrivance for burning anthracite, and indeed any other kind of coal, that should combine the advantages both of an open grate and of a close stove, without subjecting the room to the inconveniences of either. The enormous loss of heat at which coal is burnt in the common open grate has been heartsickening to those of us who have to *pay* for our coal, and to *earn* the money that we pay; for in a common open grate, where a column of air is constantly poured out of the room, up chimney, with nothing to re-place it but fresh cold air pressing through every crack, by door or window, at least three quarters of the heat that is generated by the combustion of the coal is lost to the room; and then, if, in order to avoid this sacrifice of cash and comfort, we have recourse to a close stove, our room may, indeed, be heated, but it is very inadequately ventilated; and while the air is heated, it is also vitiated by the iron plates of the stove, (often raised to a red heat,) over which it passes.

In the Doric Fire-place, the evils, both of the open grate and of the close stove, are avoided, and the chief advantages of both are secured.

We say nothing of the form or style of this article, for in regard to that every one must be allowed to decide according to his own taste. We may however remark, that it has our vote, for it presents a classic front; and if the ladies will look at it with a touching remembrance of all the "toil and trouble" that the brightening up of their brasses now gives them, we are sure we shall have their votes also in favor of the simplicity of the Doric Fire-place.

The following is a statement of its utility:

It secures the safe and *entire* combustion of the coal;

It *saves the heat* produced by that combustion, and converts it to use by diffusing it equally and pleasantly through the room;

It secures the room from *the evil of a smoking chimney*, without recourse to the bad alternative of an open door or window;

It combines, and in itself unites, all the principal advantages of *both the usual modes of communicating heat by radiation*, as in common fire-places, and by *transmission*, as in close stoves—securing the benefits of both without the evils of either. It *warms* while it *ventilates* the room. It is so far *portable* that it can be set into a common fire-place, and again removed from it without injury to the jambs, so that it may be used by a tenant without becoming a fixture. Its construction or arrangement of parts is such that the iron plates are indestructible by the heat, and will therefore *last indefinitely*.

Any person desirous of seeing the Doric Fire-Place can be gratified by calling at No. 1, Chester Buildings, corner of Broadway and Dey street.—[Mechanics Magazine.]

Essay on the Indian Summer, read at a meeting of the Maryland Academy of Sciences, by one of its Members, Baltimore, Dec. 16, 1833. [From Silliman's Journal.]

The following pages contain a few observations on that peculiar and periodical appearance of the atmosphere, usually termed Indian summer; in this essay, the writer has made a feeble attempt to explain some of the more prominent causes concerned in its production—and to offer views explanatory of the attending phenomena—such as the smoky and reddish aspect of the sky, the increased temperature, &c. &c.

Attention was directed to this investigation, in consequence of the verbal notice taken by one of the members of this Academy, of a paragraph contained in a late number of the American Journal of Science, and which requested of some one of the correspondents of that valuable work, an explanation of the causes of this occurrence. The subject at once presented itself to the mind, as one of much interest; and indeed excited astonishment, that hitherto no written or satisfactory explanation has been made of a phenomenon, which, from its regular appearance, obvious character, and marked duration, has become familiar to almost every inhabitant of this country. The total silence of books, and consequent want of reference, is a sufficient apology for many imperfections—the writer was left to draw conclusions wholly from his own reflections, on the more prominent and attending facts, and of which there is no other record than memory.

The term Indian summer has been applied to that obscure and hazy condition of the atmosphere which usually occurs towards the last of November, attended with a peculiar redness of the sky—an absence of rain—and we might add, an obviously increased temperature; which latter fact is in some degree significant of its name; probably the appellation of Indian is derived from the circumstance of this period of the year being selected by the aborigines of the country as their hunting season, to which it is highly conducive, not only on account of the plenty and perfection of the game, but also in consequence of the haziness or obscurity of the air, which favors a near and unsuspected approach to the object of pursuit. The New-England tradition is, that the term Indian summer is derived from the prevalence of the south-west wind at that time—and which the Indians supposed to be sent as a peculiar favor from their good deity Coutantowit, supposed to reside in that quarter.

Having stated that the Indian summer appears usually in the month of November, we do not, however, wish to be understood that a haziness or obscurity of the air occurs in that month only, and that its duration is confined, and peculiar to, a few days in the latter part of the autumnal season—on the contrary, common observation, (as well as minute reference to meteorological tables,) proves that it is by no means uncommon in the month of October, and is frequently mistaken then for the true Indian summer, by persons unacquainted with the proper period of its accession. This is a fact which we wish borne in mind,—as it enables us to account for one of the general laws on which the phenomenon is dependent, but which would not apply, were we erroneously to confine the prevalence of a hazy atmosphere to a few days at the commencement of winter. It is true that at this period there is usually a longer and more closely connected exhibition of character, and to which, (as before observed,) the term Indian summer is correctly applied—but were we to see no analogy in the general aspect of the fall season, we should be forced to search wholly among local causes, for the explanation of a fact, in which a regular and extended variation of temperature, (dependent on the sun's annual declination,) is obviously concerned as a leading or predisposing cause.

The regular yearly changes of temperature greatly affect the transparency of the atmosphere, and give it, at certain seasons, a peculiar appearance; for instance, during the spring, when the temperature of the air is evidently on the increase, its capacity for moisture increases faster than the additions which are made to its humidity by evaporation or moderately moist winds; whereas, during the autumn, the temperature is as rapidly on the decline, and the capacity of the air to contain moisture being on the decrease, a slight addition to its humidity produces hazy or foggy weather. This autumnal obscurity of the atmosphere would prevail more generally here, (as it does in England and the northern shores of Europe,) were it not for the frequency of our north-westerly winds, which from their dryness are always attended with a cloudless sky. Having ascertained that the annual variation of temperature is one of the great predisposing causes of the phenomenon before us, we shall proceed to trace out other auxiliary causes. A second prominent cause, which we therefore notice, is the prevalence of peculiar winds; for the translations of large portions of the atmosphere from one parallel to another must always be regarded as one of the most powerful causes by which the transparency of the air is affected; and, as before observed, a north-westerly wind, (from obvious causes,) brings with it a smaller supply of moisture than belongs to the mean hygrometric condition of the air in this region, and is hence always attended with a transparent atmosphere, so the very reverse is occasioned by easterly and southerly winds which obscure and thicken the air. The humid effects of particular winds are however greatly modified by local circumstances—a celebrated naturalist remarks, "that the sky of Xalappa in New Spain, which is beautiful and serene in summer, assumes a gloomy appearance from the month of December to the month of February; whenever the north winds blow at Vera Cruz, the inhabitants of Xalappa are enveloped in a dense fog, and the thermometer then descends to 45 or 50 degrees;" (on our coast the haze is produced by a warm current from the south, hence the thermometer rises with us instead of falling.) So at Lima, in Peru, the cloudy state of the air begins about the middle of July, and continues to the end of November, the wind blowing chiefly from the south and south-east. The third cause which we shall notice as concerned in the production of the Indian summer is the elevation and depression of atmospherical strata; this effect is sometimes produced by electrical agencies, by elevation and conformation of country, but more generally and extensively than either by changes of temperature at the earth's surface, for it is a well known fact, that the air, being a diaphanous body, can receive no direct heat from the solar rays, but becomes warmed only by the contact of its lower stratum with the earth's surface, which portion when rarified ascends and gives place to a cooler descending one: this remains below, until its thermal condition is again altered, when it re-ascends, thus establishing a constant circulation and perfect admixture of the different strata of air. That electrical agencies are concerned in the elevation and depression of atmospherical strata, there can be no doubt, but we are aware that the immediate and more extensive operation of this cause is in tropical latitudes. Thus Humboldt, in his personal narrative, remarks, "that the rainy season takes place within the tropical regions, when the causes which concur to produce a mixture of the atmospherical strata operate with the fullest effect; for instance, when the sun approaches the zenith of any particular parallel, the trade winds become less regular, the temperature increases, and the causes which contribute to the humidity of the atmosphere act with fullest vigor. The superincumbent columns of air are soon saturated with vapor, the production of which is accompanied by a great accumulation of electricity in the higher regions of the air; at length an intermixture of the strata begins to take place, produced chiefly, it would appear, by electrical explosions; the precipitation of the condensed vapor commences, and proceeds, (especially during the day,) with scarcely any intermission. The rain now descends in vast sheets; the rivers, raised above their ordinary level, can no longer be confined within their banks; and the supply they receive from the clouds exceeding the discharge by their channels, they spread far and wide over the adjacent fields, and exhibit on every hand a dreary expanse of muddy and discolored waters. This state of things undergoes little alteration until the sun returns to the signs of the other hemisphere; at that period the aerial currents from the homonymous pole are renewed, and the air which flows from it being very far from the point of saturation, the rains cease, and the sky resumes its former clearness and serenity."

[*To be continued.*]

Corn for Hogs.—Those who have not the conveniences for cracking or boiling their hard corn, can easily provide ways and means to give it a slight fermentation.

Improvement of the Barometer.

[From the American Journal of Science and Art.]

To Prof. SILLIMAN:

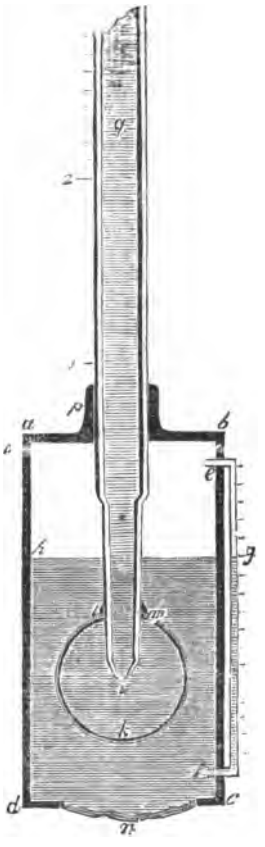
Dear Sir,—In the frequent use of the portable barometer, I have often experienced much inconvenience from air entering the tube, at times when perhaps great precision was necessary, not only for ascertaining the altitude, but likewise for weighing the atmosphere, which is sometimes intimately connected with other experiments, then under a course of investigation.

Although one of the most simple in form, the barometer is probably one of the most difficult instruments to *construct*. The frequent breaking of the tubes, while undergoing the great heat which is necessary to exhaust the air, requires more patient care for this tedious process than most men are able or willing to devote; and yet, without this process, and that well and effectually performed, the air must be diffused through the mercurial column, or escape to the top, where it destroys the vacuum, in which case the instrument is not suitable for the purpose intended, and does not deserve the name of barometer. The manufacturer who would allow such an instrument to pass from his hands to the world, is guilty of a great misdemeanor, and deserves the censure of all good men; for such imperfections have prevented the barometer from attaining the rank which it deserves in the estimation of the world. It is an insult to the memory of *Torricelli*, who will yet be ranked among the greatest benefactors of mankind.

It is to be regretted that so many imperfect or deranged instruments are in use. It destroys all confidence in the barometer, and I know some persons who *deride* its well known properties of predicting winds, and even treat the idea as *chimerical*. But such men could not have possessed a perfect instrument, or have devoted a proper attention to the observations, as thousands can testify to its efficient warnings; when, by suitable and timely preparations for the predicted hurricane, property and lives have been saved from the devastating elements, which would otherwise have involved the whole in ruin.

Although in the construction and repairing of my barometer I was generally fortunate in clearing the tube entirely of air, yet, in use, I think I never kept it one year in that perfect condition. This repeated derangement and consequent expenditure of time, patience, and money, led me first to inquire the cause, which I soon learned, and then undertook to invent something which should effectually prevent the evil. I soon succeeded, even beyond my most sanguine expectations, so as even to render the instrument perfectly secure against all accidents, except breaking, to which *all* instruments are subject. With this security I have not encumbered the barometer with any thing on the outside, but the whole is confined to the cistern, thereby retaining the instrument in the most *portable* form.

The annexed engraving represents a vertical half section of the barometer. *a b c* and *d* is the cistern, two inches long and one inch in diameter. *e* and *f* is a glass tube, open at both ends, and let into the cistern above and below zero, which in the barometer is always changing its position. The original zero is marked on this tube at *g*, with decimal parts of the inch, extending above and below, to be deducted from, or



added to, the height of the mercurial column in the large tube. *h* is zero, which, when made on a level with the ocean, stood ¾ of an inch from the top of the cistern, which immerses the top of the globe ⅜ of an inch in mercury. The ¾ of an inch between original zero and the top of the cistern, leaves sufficient space for the column, in high altitudes, to fall: a circumstance which has never been properly attended to in constructing barometers; although probably no other barometer will admit of so much space, without endangering the instrument. *i* is the end of the tube, with the column drawn to a small point, which answers precisely the same purpose as the contraction in M. Gay Lussac's "improved marine portable barometer." But in this case the contraction at the bottom of the tube possesses other advantages than merely to prevent the sudden rise and fall of the mercury; for by placing the contraction at the bottom, we can draw the end of the tube to a small point, which renders the column less liable to admit air, either from a concussion or inverting its position.

This improvement alone I deemed of sufficient importance to justify the *construction* of a new barometer, and was actually prosecuting it, when an idea of the *globe* suggested itself to me.

In all the portable barometers that I have seen, the end of the tube is cut or broken off in a careless manner, which as often leaves it *concave* as *convex*, and it must be apparent to every one who will examine the subject, that bubbles of air striking the *concave* end of a straight tube are more likely to enter the column than to roll off.

k is the *globe*, ⅜ of an inch in diameter, fixed firmly on the tube at *l*, and has a very small aperture at *m*, the only place where the mercury inside can communicate with that in the cistern. The globe is of cast steel, with which mercury is known to come in *perfect contact;* consequently the atmospheric pressure *cannot* force the air through this aperture, nor through the bottom of the tube. By examining this arrangement, you will perceive the impracticability of even *forcing* the atmosphere through the globe, much less the possibility of its being driven there by inverting and re-inverting the instrument, or by any jar or concussion which it may receive while in use or being transported.

Even admitting air to be *placed* in the globe, it is apparent that it would find its way out by the aperture one hundred times oftener than it could possibly enter the tube.

n is the leather bag through which the atmosphere communicates its influence to the whole interior of the cistern and column. Leather is the most in use, although there are other methods to admit the atmospheric pressure, in forms of the instrument, which are perhaps not so portable; although, for general use, a short tube, with a stop-cock or plug inserted in the top of the cistern, is probably the best.

o represents a screw joint of the cistern, where it is separated while attaching the globe to the tube; for the tube being connected with the cistern at *p*, would render it impracticable to fasten the globe without this separation. I mention these minutiæ, because those who undertake to make a barometer on this plan may otherwise be subject to the same perplexities which I experienced in the construction of mine.

I did not succeed in obtaining a globe, until the *third* person made the attempt, and produced it from a solid piece of steel. If made in *two* parts, it would necessarily be joined with solder, on which the mercury would act too powerfully.

The screw joint at *o* may appear simple and useless, but the *want* of it occasioned a delay of many days, and caused the breaking of several tubes, while trying to fasten the globe. The person employed on this part, twice threatened to abandon the work as impracticable, when fortunately the idea occurred to me of disconnecting the cistern in that part to afford ample space to work at *p*.

q is the mercurial column, ¼ of an inch in diameter, except the part inside of the cistern, which is diminished in order to leave the more vacant space for the column to fall in high altitudes, and likewise to lessen the large orifice in the globe through which the tube enters.

Other proportions than those here given may serve equally well to construct a barometer on this principle, but these are the dimensions of the one which I have now completed, and for distinction will call the *Globe Portable Barometer*. It has been inspected by several scientific gentlemen, who, with my request, exposed it to all the causes which usually derange barometers, such as jarring, shaking, concussions, inverting and re-inverting its positions, without causing the least perceptible derangement. I invite all, who are so inclined, to call and see it; and to those who desire to make one, I will cheerfully give any information in my power to aid them in its construction.

Since the invention of the barometer by Torricelli, many learned men have devoted their attention to the improvement of this valuable instrument, and among the most useful is probably M. Gay Lussac's "*Improved Marine Portable Barometer*," wherein, at a certain point, the column of mercu-

ry is contracted to prevent the sudden rise and fall of the mercury by the undulating motion of the ship, while the remainder of the column retains sufficient diameter to avoid a very sensible effect from the temperature of the atmosphere. But this, as well as other forms of the barometer, whether secured by the screw and cushion pressing on the bottom, or by the stop-cock as employed by Mr. J. F. Daniels, is liable, by sudden turning or concussion, to admit air into the tube; for although the cushion and stop-cock renders the instrument *portable*, it never can be *employed* as a barometer, until the entire column is open from the hermetical seal to the cistern or atmosphere below. It is in this situation, (the only one of practical use,) that the instrument is deranged. *First*, by suddenly inverting and re-inverting the position, so that, (while passing from the bottom to the top of the cistern,) the air strikes the end of the mercurial column, and must rise in the tube, because it is lighter. *Secondly*, by a concussion which it receives every few minutes while in use, either from the motion of the ship, the carriage, the shrubbery on a mountain, or the unavoidable contact with the car and cords in a balloon; for by observing the mercury in a glass cistern, you will perceive that a concussion causes a motion like the sea waves, which mounting on one side frequently leaves the end of the tube exposed to the atmosphere, which here strikes the base of the column, and rises in the tube by its comparative weight. *Thirdly*, it is asserted that the barometer, in a course of years, will have accumulated air above the column, even if during all that time it should have been suspended in a room, without any jar or concussion to communicate the least motion; and the two most probable causes assigned are, first that the air enters through the pores of the tube, and secondly, that mercury never comes into perfect contact with glass; the latter is the most probable cause, from which it is inferred that the air in the cistern is by the atmospheric pressure forced down in extremely minute particles between the mercury and the tube, where it acquires the additional impetus of its own comparative specific gravity, and rises between the mercury and internal surface of the tube to the top of the column. As a preventive to the latter derangement, it has been suggested, and I believe practised by some, to fit closely on the bottom of the tube a ring of platina, or any other substance with which mercury comes in perfect contact, although without sufficient action to cause, for years, any perceptible diminution.

From the important purposes to which the barometer is adapted, it may well be supposed to have enlisted the attention of the most scientific men in all countries, and, indeed, for some of its uses it is invaluable, and probably no instrument will ever be invented with any proportion of its combined properties. For although by a number of instruments we can weigh the atmospheric pressure, yet even if the instruments would give the precise weight, the time occupied to obtain the result would render useless the object for which the trial was made, as the wind or calm would have actually arrived which was predicted by the state of the atmosphere when the barometrical observation was made.

A gentleman commanding one of the New-York and Havre packets, for whose scientific knowledge I entertain a high regard, told me, "that when the ship was moving with much velocity, even the barometer could not indicate the current of air," for, said he, "the ship will have moved beyond the influence of the wind, which was indicated when the barometrical observation was taken." The remark is worthy of consideration, and the want of a due attention to it is probably one of the causes which has aided to retard the more general use of this instrument among mariners. But by far the greatest cause which has prevented the universal use of the barometer, is the difficulty of procuring a good one, and the still greater difficulty of retaining it in perfect condition. It is not always easy to procure a workman competent to construct one, and when such a man is found, he is not able to devote that attention which is necessary to its adjustment, and to the boiling of the mercury in the tube, lest he should not meet the views of his customers, who are in the habit of purchasing at too low a price.

We may measure mountains by observed angles, but those who have tried the various methods give a decided preference to the barometer, which, in some cases, is the only instrument by which we can ascertain their altitude. For the cyanometer never can be used with accuracy, while sight differs with different men, or while the coloring matters for the blue tints differ so much in consequence of the soil or matter which produce them, and are so subject to change by exposure to the various climates. In the account of his travels and philosophic researches, Baron Humboldt has in many instances given us the degrees exhibited by the cyanometer, but for any satisfaction to the world, or benefit to science, he may as well have spared himself that trouble, for allowing all men to see alike, who, on being told that the cyanometer exhibited 10 or 60, has any conception of the height? We have nothing to which we can refer for accurate comparison, either impressions on the brain, or unalterable blue colors portrayed in cyanometrical form.

Being at Paris in July, 1828, I applied to some of the most reputable philosophical instrument makers for a cyanometer, but not one of them had any knowledge of it, or even knew there was such an instrument. I then called on Messrs. Gay Lussac, Cuvier, and Biot, for information respecting it. The last named gentleman was absent from the capital, which deprived me of the pleasure and information I should have derived from a conversation with him. M. Gay Lussac told me, "that he considered the instrument of very little utility, and that it was found only in the works of M. Saussure, a young gentleman of extensive scientific acquirements, who with an inventive genius combined an untiring zeal for knowledge. He travelled extensively, and it was during his passage over the Alps, where, from the blue color of the heavens, an idea occurred to him of constructing an instrument with degrees and altitudes marked to each of the blue shades, which should correspond to those in the heavens." And, continued the sage philosopher, "Saussure is dead, and those only who have been at great heights, and retain a recollection of the color, are capable of making a cyanometer."

With the information I derived from him, and my subsequent experience of these colors, I constructed such an instrument; and after repeated trials, comparing it with the barometer, at various altitudes, I found it could not be relied on for accuracy.

Many men who have devoted their attention to the subject I believe are convinced, that both the cold and darkness increase as we recede from the earth; and I have no hesitation in saying, that beyond the earth's atmosphere it is as much darker than night as any thing we can conceive; and although this darkness may increase in regular progression from the earth, still, from causes before related, I do not believe that any instrument can be found as a substitute for the barometer in measuring high altitudes.

At my fifth ascent with a balloon, from New-York, in May, 1833, I was compelled, in consequence of a high wind which prevailed, to unmoor without any philosophical instruments, except the cyanometer, which I had fortunately placed in my pocket-book. From causes which were stated in the public journals, the balloon was uncontrollable for some minutes, (a part of which time it was ascending with nearly the rapidity of an arrow,) although immediately on leaving the earth I opened the valve, which is near the top, and through which the gas would soon have escaped, but for the rapid upward motion, which caused so much resistance or pressure from the atmosphere as to retard the escape of the gas until thirty or forty minutes, when the aerostat was poised in air, and I had reached a greater altitude than I have before or since attained. Here for the last time I tried the cyanometer, which, for any utility, I might as well have left below with the barometer. The heavens were many shades darker than the blue tints to which I had affixed an approximate degree and altitude on my cyanometer, and so uncertain is sight, that when I had selected a corresponding shade on the cyanometer, in one instant the heavens would appear too light and the next moment too dark. I resolved then to abandon all further experiments with an instrument which promised to be of so little use; and if it was not to confirm M. Gay Lussac's remarks, and prove the superiority of the barometer, I should not have considered the experiments with the cyanometer worth communicating to the world.

I am aware that, among scientific men, there is an unbelief of the fact that *intensity of darkness increases as we recede from the earth*, but I do not consider it my duty here to enter upon a proof of the assertion, or attempt to explain the cause which produced it. I should infringe on your pages with a work which I do not feel competent to perform, and will leave that for more able pens than mine. The world may expect to have soon a rich intellectual treat on that subject from a gentleman in Baltimore, whose scientific acquirements, added to his profound reasonings and lucid mind, I am satisfied, (from personal acquaintance,) render him in all respects competent to perform the task.

My object in this communication is to explain the principles of my improvement in the barometer, to point out its *advantages* over all others, and induce the world, through your widely circulating Journal, to use the *globe* in all cases where the instrument is required to be *portable*. If science can be improved, and mankind receive a benefit

from this effort, if will afford me much pleasure to have contributed a mite to so noble a cause. CHAS. F. DURANT.

Jersey City, 18th July, 1834.

FOREIGN INTELLIGENCE.

ONE DAY LATER FROM EUROPE.—By the packet ship Sovereign, Capt. Griswold, there are London papers to the 7th inclusive.

Don Miguel, after stopping two days at Milan, proceeded to Parma.

GOTTENBURG, AUG. 22.—The cholera has raged dreadfully here from the 26th of July to the 21st of August. Out of a population of 23,000 souls 9,800 have fallen victims to it: among whom are many of the higher classes. Of the Jews only one woman and her son have died. All business is suspended. The few workmen that remained were employed in removing the dead bodies. The great mortality among the poorer classes is ascribed to unwholesome provisions, and irregular modes of life.

The rain, which has so long been wished for, having fallen, the air is purified, and the cholera appears to abate. No goods have been shipped, as all the ship owners and crews have fled.

GOTTENBURG, AUG. 27.—According to accounts from Inkeping, 250 persons had died, and 400 patients remained. At Uddewalla there have been 66 deaths out of 167 patients: at Krunstad 38 out of 104; at Marshaur 15 out of 40; at Kongelf 7 out of 19. The number of deaths here may be reckoned at 2,200; but the disorder is manifestly abating.

STOCKHOLM, AUG. 26.—His Majesty yesterday held an extraordinary Council on measures against the cholera. Unhappily there is no doubt of its having broken out here, and it is probable that the capital will be declared infected before the day is ended. The first known cases were the day before yesterday, 15 in number; 10 of the patients were sent to the hospital, of whom two died on the way, and two after they arrived.

In the interior of the kingdom the cholera is spreading, and has appeared at Stronstad, on the Norwegian frontiers. Count Roun writes from Gottenburg that the citizens had granted $30,000 to the cholera hospital.

LATER STILL.—We have, by the Mariposa, papers to the 11th ult. inclusive, from London, for which we are indebted to the Captain.

The Times of the 11th, says—"We have by express the Paris papers of Tuesday, (9th inst.) The intelligence they bring from the frontier continues vague and not very satisfactory. It states that Don *Carlos* had gone to Biscay, and that *Rodil* is pursuing him. *Rodil* had taken great pains to remain master of the entire valley of the Bastan."

The measures of the Spanish Ministry respecting foreign loans made to Ferdinand, are exciting much interest in France, where chiefly the loans were effected. A petition was presented by the bondholders on the 6th September to the King of the French, and it is apprehended that the measure of the Spanish ministry, which is no other than a refusal to recognize those loans, might lead to an interruption of the good understanding between the people of France and Spain.

A Court Martial had been held on the officers of the Castor frigate, for running down the Chameleon cutter in the Channel, which resulted in the dismissal from the service of Lieut. J. J. McCleverty, who was the officer of the watch, for not "keeping a proper look-out on board the Castor." The other officers were all acquitted.

Efforts had been made, without success, to weigh the Chameleon. The bodies of the crew had been found, and generally in a sadly mutilated state.

LATER FROM EUROPE.—By the Orpheus, from Liverpool, we have papers from that port of 16th, and from London, of 15th ult.

There is little of moment in these papers.

Advices from Madrid are to the 5th. The Spanish Cortes had, after a long discussion declared by a vote of 57 to 55 to abolish the censure of the press. Hereafter the press is to be free;—this is one of the most important measures ever adopted, and will in its effects be productive of immense benefits. All was going on well in Portugal.

France was quiet.

[*From the London Morning Herald, of Sept.* 15.]

We have received by express, the Paris papers of Saturday and Sunday, together with letters from our correspondents in Constantinople, Madrid, Bayonne, and Paris.

The intelligence that has reached us from Spain by this conveyance is important. The *Journal de Paris* of Friday night last, contained a bulletin, a copy of which will be found subjoined. This document proves that the Queen's officers and troops in the Basque provinces were as actively occupied as ever by the insurgents, but no engagement had yet taken place between those belligerents. El Pastor had moved on Biscay, Rodil had left Tolosa for Azcoytia, Don Carlos was at Orsco. Our Bayonne letter, dated 9th inst., conveys to us some details of the proceedings of both parties, which show that neither had the slightest idea of withdrawing from the contest. Don Carlos was continuing to confer on deserving individuals the decorations of the Royal Orders of Spain with as much gravity and apparent sense of security as if seated in the Escurial. He had—with a view to expose the positive intervention of the French—forwarded to the Emperor of Russia the original letter of General Harispe to General Rodil, which had been intercepted by Zumalacarreguy at Locumberry some weeks since, and attested copies of it to the other Members of the Holy Alliance.

PARIS, September 13th.—The Bourse has been inundated during this day, with reports of the dissolution of the Spanish Ministry, said to have been received here by a courier who left Madrid on the 9th instant.

Although nothing is more likely to be the fact than that such an event has taken place, I am inclined to believe that the report is premature—at least it is quite impossible that a courier could have reached here in four days, as in the most tranquil times, and by the most direct road, the journey between Madrid and Paris was never made in less than 102 hours.—Up to a late hour of this forenoon, the French Government had not received from the Spanish capital despatches of a later date than are your own private letters, which I transmit herewith—the 5th inst.

On the subject of the Spanish debt, it may not be out of place to observe here that on Thursday last a deputation of the French creditors of Spain had an interview with Admiral de Rigney (Minister for Foreign Affairs,) at his hotel in Paris, and were informed by him that the French Ambassador in Madrid, was doing all in his power to prevent the meditated breach of faith with the French creditors.

Our private letter from Constantinople, is dated the 19th ult. The Sultan, it will be seen, had abandoned his hopes of re-possessing the former provinces of Syria, and had desisted from his intention to support the insurrection against Mehemet Ali, solely from want of means.

The Parisian public is at this moment attracted to the Royal Library, to examine the manuscript autograph memoirs of Cardinal de Retz, which have been found amongst the papers of the late Count Real.—[Galignani.]

A curious anecdote is related of the cause of Mr. Rothschild's recent heavy loss by the fall of Spanish stocks. Mr. Toreno, the present Minister of Finance in Spain, was exiled by Ferdinand VII. for having been President of the Cortes in 1823. He resided in Paris for a long time, and having become very much reduced in his circumstances, applied to Mr. Rothschild for a loan of twenty thousand francs, which was refused. When Toreno, a short time since, was placed at the head of the Spanish department of finances, Mr. Rothschild proposed to him a financial operation, by which he, Mr. R. would have realized several millions: Toreno not only rejected it, but knowing that Rothschild was a large holder of Spanish stocks, proposed to the government the scheme of bankruptcy which has had the effect of suddenly depressing Spanish funds to such a degree as to cause a loss to Mr. Rothschild of twenty millions of francs.

Curious Coincidence.—When the Kent East Indiaman was on fire in the Bay of Biscay, the second in command, the present Lieutenant-Colonel M'Gregor, when all hope of relief had expired, wrote a letter describing their situation, which he enclosed in a bottle, and committed to the deep. Soon after his providential escape, and return to England, he was appointed to the command of the 93d Highlanders, then stationed at Barbadoes, to which place he proceeded immediately. Before his arrival, or soon after it, the identical bottle was picked up by one of the men of the 93rd on the coast of the island, and its contents brought to the very man who had written them.

Statistics of Greece.—According to the last census the entire population of Greece amounts to only 811,185 souls. In that kingdom there are 116 towns, and 2,146 villages, exclusive of those of the isles of the Archipelago, of which 33 only are inhabited.

Important Medical Discovery.—Two physicians, at Gottingen, have, it is declared, lately discovered that the oxyhydrat of iron is an infallible antidote against arsenical poison. As the oxyhydrat of iron is perfectly innocuous, this discovery is peculiarly interesting.

MEMS. FOR WINE-DRINKERS.

(From Busby's Journal of a visit to the principal vineyards of Spain and France.)

MANUFACTURE OF CLARET.—The finest Clarets of Bourdeaux are mixed with a portion of the finest red wine of Hermitage, and four-fifths of the quantity of the latter which is produced are thus employed. The wine is racked off the lees in spring, and sulphured. A very small piece of sulphured match is burnt in the casks intended for the white wine; the red wine requires a greater portion. These matches are purchased from persons who make a business in preparing them. They are slips of paper, about one inch and a half broad, and, when coated on both sides with sulphur, are about the the thickness of a sixpence. A piece of one inch and a half square is sufficient for a cask of white wine containing fifty gallons.

DESCRIPTION OF THE CELEBRATED HERMITAGE VINEYARDS.—The hill of Hermitage is so called from an ancient hermitage, the ruins of which are still in existence near its top. It was inhabited by hermits till within the last 100 years. The hill, though of considerable height, is not of great extent; the whole front which looks to the south may contain 300 acres, but of this, though the whole is under vines, the lower part is too rich to yield those of the best quality, and a part near the top is too cold to bring its produce to perfect maturity. Even of the middle region the whole extent does not produce the finest wines. M. Machon, the gentleman whose property we were traversing, pointed out to me the direction in which a belt of calcareous soil crossed the ordinary granitic soil of the mountain, and he said it requires the grapes of these different soils to be mixed in order to produce the finest quality of Hermitage. I took home a portion of the soil which he pointed out as calcareous, and the degree of effervescence which took place on my pouring vinegar upon it indicated the presence of a considerable portion of lime. It is probably to this peculiarity that the wine of Hermitage owes its superiority, for, to all appearance, many of the neighboring hills on both sides of the Rhone present situations equally favorable, although the wine produced even upon the best of them never rises to above half the value of the former, and in general not to the fourth of their value. A good deal may also be attributable to the selection of plants. The best red wines of Hermitage are made exclusively from one variety, and the white wines from two varieties; but in the district generally a much greater number of varieties are cultivated. The Red Grape is named the Cyras. The white varieties are the Rousette Marsan. The former yields by itself a dry and spirituous wine, which easily affects the head; the plant produces indifferently—the latter yields a sweeter wine—they are mixed together to produce the best white Hermitage.

MODE OF PREPARING CHAMPAGNE WINE.—The very eminent wine house of Messrs. Ruinart and Son, of Rheims, are agents for Herries, Farquhar and Co's notes. Having called upon them to cash one of these, M. Ruinart, junr., conducted me over the wine cellars, which are very extensive, and all subterranean, consisting of three under-ground stores, one beneath another, all mined out of the lime stone rock. The wine, which has received the last attention which it requires, and is ready for expediting to the consumer, is packed in large square masses, bottle above bottle, and side by side, with no other precaution to keep them steady than a lath passing along beneath the necks of one layer and the butts of the next layer above. They generally send the wine to the consumer at the age of three and four years, but after the first winter it is all put in bottle. The stock, therefore, appears immense, and indeed it is very large; for not only are different qualities required, but also different descriptions, to suit the varying tastes of their customers in England, America, and Russia, to which countries Messrs. Ruinart make their chief exports. A gentleman, with whom I travelled, told me that he could buy very good sound Champagne at Chalons for two francs a bottle, and

was then going to purchase 100 bottles at that price, but respectable wine merchants never send any to England under three francs a bottle. What is sent to England is more spirituous, and froths more strongly than what is sold for domestic consumption. The greatest and most minute attentions are necessary in preparing Champagne. The casks in which it ferments, after running from the press, are previously sulphured to prevent the fermentation from proceeding to too great a length. It is twice clarified during the winter, and in the month of March, before the return of spring has renewed the fermentation, it is bottled off. When in this state, the bottles are placed in frames, diagonally, with their heads downwards. The lees are thus collected in the neck of the bottle, but they do not consider it necessary to uncork the bottles as soon as the wine is perfectly clear, nor is it considered that there is any danger of the wine spoiling, if the return of warm weather should cause a recommencement of the fermentation, and remix the lees through the wine. On the contrary, they sometimes allow the lees to ripen, as they term it, longer than usual. The wine, in general, remains in this state, till the following winter; each bottle is then placed in a frame and carefully uncorked. The contents of the neck of the bottle are emptied. It is filled up from another bottle of the same wine, and, being recorked, only requires age to give it all the perfection it is capable of. It of course often happens, that the wine has either undergone less than the usual fermentation, or, being stronger than usual, requires a greater fermentation before being put into bottles; and it consequently happens that the fermentation in the bottles is greater than they can bear, and that a large proportion of them burst during the first summer. The floors of the wine cellars are all covered with grooves, sloping to a gutter, by which the wine that has burst the bottles is conveyed to a cistern in the floor, and, as there is the most perfect cleanliness observed, a part of the wine is thus sometimes saved.

[*From the London Literary Gazette.*]

A TALE OF THE SEA.

"Sam L——was a lad of a temper as joyous and as kind as ever was wedded to a daring spirit. He was not of that class called nobly born: his name had shed no lustre on his dawning fortunes; so, if recorded, it could add no interest to his story. His honest ambition was 'to build, not boast,' the credit of a name which he derived from an humble house; and, poor lad! he died too young to reap the glories to which his warm heart aspired. It is inscribed only on a small stone raised, in a foreign land, by the affections and esteem of his messmate, who

> 'Still, through the wild waves as they sweep,
> With watchless eyes and dauntless mien,
> Their steady course of honor keep;'

and they loved him well, because they had known him nearly. At nineteen, he had passed for a lieutenancy; and by that fortune which sometimes forms a young seaman's early fame, he was placed in command of a clipping privateer schooner, made prize of by the frigate on board of which he served. She had been captured on an enemy's coast, and his orders were to join in her the admiral's flag, which was flying some fifty or sixty leagues off on the station; and few who have not felt can know the joy of a stripling's heart who finds himself sole master of a separate command, and knows that he has skill and resources for it. For two days nothing happened to vary the ordinary log of a beating passage in light winds. The third day was a thick fog; and, as it cleared up towards evening, with a rising breeze, a stranger was seen to windward under three topsails: and what could he do but trim sails to reconnoitre? 'Tis true, he had no orders but to proceed with due diligence to his station; but to go about and stand on for an hour on the other tack, and so edge a little nearer the stranger, would by no means take him out of his course; and who is there but knows that one of a seaman's first duties in war-time is, when not under orders positively to the contrary, to gain all intelligence of a suspicious looking sail? He had not gone upon the starboard tack above half an hour, before he saw another large sail, hull down, on his lee bow; and the last sunbeam was now red in the west. It was plain that he could not hope to bring either of the ships within distance before dark to shew colors; but they made more sail, and the headmost bore up a little as to near him. He now tacked again, and feeling that he had no right to run into strange company at night, he kept a point or two free under easy sail, in a parallel to the course she was steering, trusting to a good sailing craft, and a commanding breeze, and a good look-out withal. As it became dark, he tried his night signals. For awhile there was no reply; and then the headmost ship shewed lights: but her answer was unintelligible to him. The code of night signals in the British navy was, at that time, imperfect, and subject to many mistakes. At daybreak they were both on his weather quarter, the nearest about three miles off; but two more large ships shewed their lofty sails on the horizon. It was a clear morning; and the leading frigate—for frigate the two first were—now signalized him; but her flag spoke a language as foreign to him as that of her lights had been the night before. Both had the ensign of England streaming from the peak; but it was most improbable that an English squadron should be cruising on that part of the coast; and now his private code was tried in vain; and something there was in the cut of the sails, but more in the way of handling them, which almost convinced him that they were foreigners. The moment was an anxious one; but it was to Sam one more of mortification than anxiety for the fate of the charge intrusted to him. He had a good clean craft beneath his foot, and, let the weather but keep moderate, and not too much sea, come what would, he had reason to believe that, holding a steady luff, the schooner might yet weather upon their square sails, so as to get to windward of them without passing within gun-shot; but he knew that his duty was not to risk his prize when nothing was to be gained; and little to be sure was to be gained by working up to overhaul two strange frigates, and two other ships of war, proud though he was of his command, in a schooner mounting eight twelve pound carronades and a long traversing gun amid ships. So now shaking out the last reef from his foresail, he prepared to carry on, and a regular and eager chase began. For a time, he believed he was increasing his distance from the leading ship. At all events, he stood nearer the wind, and she was not preceptibly fore-reaching on him; and her consort was evidently dropping fast astern. But alas! the clouds rose black as thunder on the horizon, the white horses came speeding along with them in the distance, it had already begun to blow strong, and the wind was gradually drawing more aft and bringing the pursuer nearly on his beam. The vessel groaned and staggered under the pressure of sail; the sea curled high over her lee, and sheets of spray at every pitch came flying over all. Suddenly the headmost frigate, which was now gaining rapidly on him to within long gun-shot range, hauled down the colors she had worn, and hoisted a different ensign at her peak. It was the one which, at that moment, Sam could least have wished to see; it was that of a gallant nation, between which and England long may it be before again a cannon shall speak in anger. A gush of white smoke issued from her bow; and, before the sound of the threatening message could be heard, a shot came skinning over the tops of the waves right ahead, of the schooner. Presently another, which passed over her, between her masts, but struck nothing. 'Now point the long traversing gun, and cast loose the weather carronades, against closer work; for here's what tells us she's within distance already of our midship challenger.' Something might be brought down by it which might slacken the frigate's pace, and save the little vessel yet: so up went the union; and as the schooner lurched, Sam himself, with a ready hand to the lock lanyard, quick answering to a ready eye, fired the first shot in reply, and jumping up on the slide, saw it strike right under the frigate's cutwater. 'Give it her again, my hearts!' The second shot parted. 'Well done, long Bess!' bellowed the mate, the glass to his eye; 'splinters near the forcastle!' Again!—when an eighteen pound ball came in from one of the enemy's bow chasers, struck a timber head, and two men lay in blood upon the deck: the one a mangled corpse, the other with a leg knocked sheer from under him. 'Luff her up a bit!' cried Sam, still firmly looking at the advancing ship, whose bow now towed high above the water. 'Starboard the helm! Now watch your time, men; stand by for a broadside!' Six of the schooner's eight carronades had been run out to windward; and, as she luffed up to bring them to bear upon her adversary, the fire of the whole weather side was given at once. Her slight frame heeled from the explosion of her own guns, and she quivered from the centre to the mast-head: and, hurrah down came the frigate's driver; but, in an instant after, as her helm went down, and her head sails shook in the wind, the red muzzles of the whole tier, to her quarter guns, appeared, and a tremendous broadside from her main deckers followed, as she luffed and came up to deliver it. The schooner's counter was torn up to the very bulwarks: three men were, as it were, blown away before the blast of the artillery, and a splinter striking the young commander near the chest, broke his left shoulder, and dashed him down against the side. The gallant youth sprang up: his arm hung mangled, and the blood gushing forth from his mouth, showed what had been the violence of the blow; but his courageous eye, unclouded yet by pain, lit up with matchless energy. 'Stand to it, my hearts, my darlings!' he shouted; but the whole mischief now appeared. As the wounded boy staggered once more to the weather bulwark, to hold on, he looked up. The crippled mainmast reeled.—'Lower away! lower away!—ease off the fore-sheet, and put her right before it? For a few moments the fight was silenced. All hands were busy aft in getting up a preventer shroud and fishing the mainmast; and, as she was falling off, another broadside came from the frigate's quarter deck. The havock was not so great as before; but an unlucky shot, ranging forward under the bows, severed the bobstay. The powerless bowsprit could no longer stay the foremast, as it swayed forward and aft with the send of the sea. "Get out a tackle forward!—up with the helm! Hard! But it was too late! The weakened mainmast, now deprived of all support, broke short off where the shot had entered. It fell with a tremendous crash: the deck, forward and to leeward was overwhelmed with a mass of confused ruin; and the vessel was left rolling on the swell, a defenceless wreck. 'Will you strike, sir?' whispered the mate! 'See your men lying about—and—' ——'Never;' exclaimed Sam, in the last excitement of a dauntless heart: 'not I! Haul in the ensign that's towing there alongside, and send a hand,' pointing upwards, 'to stop it to that stump there.' I suppose,' continued he, in a lower tone—'I suppose they'll have it down without us soon. I see she's lowering a quarter-boat We have but to wait for them now!' He sat down on a carronade slide. His face was deadly pale.—Suddenly rising, he drew his hanger from its sheath, and, with a strong blow, broke it in two, across the carronade. His father had given it to him at parting, On its blade was engraved a powerful talisman—'England expects every man to do his duty!' As the first boat (for two were lowered and manned) pulled up under the stern, he flung the pieces into the deep, and again sunk upon the deck, his face resting downwards on his right arm as he lay. 'Mr. L.——, sir,' said the mate 'they're alongside. Look up, sir. Come, sir, dont be ashamed; you've fought her well, and they wont make much of the prize, at any rate. Oh, Mr. L——, I hope you're not much hurt, sir. All's over now?' He raised his brave young officer in his arms. Yes, all was over, indeed! He never spoke again, nor did his eyes ever more unclose, to see his darling first command in the hands of another! But a gallant enemy did honor to his memory, and to his remains. All nations have brave men: and so,

> "God rest his soul!
> Sith 'twill no better be—
> We trust we have, in this our land,
> Five hundred good as he."

THE RAINBOW.—By Felicia Hemans.

"I do set my bow in the cloud, and it shall be a token of a covenant between me and the earth."—Gen. ix. 13.

Soft falls the mild reviving shower
From summer's changeful skies;
And rain drops bend each trembling flow'r,
They tinge with richer dyes.

Soon shall their genial influence call
A thousand buds to day,
Which, wanting but that balmy fall,
In hidden beauty lay.

E'en now full many a blossom's bell
With fragrance fills the shade;
And verdure clothes each grassy dell,
In brighter tints arrayed.

But mark that arch of varied hue
From heaven to earth is bowed!
Haste! ere it vanish, haste to view,
The rainbow in the cloud!

How bright its glory! there behold
The emerald's verdant rays;
The topaz blends its hue of gold
With the deep ruby's blaze.

Yet not alone to charm thy sight
Was given the vision fair;
Gaze on that arch of colored light,
And read God's mercy there.

It tells us that the mighty deep,
Fast by the Eternal chain'd,
No more o'er earth's domain shall sweep,
Awful and unrestrain'd.

It tells that seasons, heat and cold,
Fix'd by his sovereign will,
Shall, in their course, bid man behold
Seed time and harvest still.

That still the flower shall deck the field,
When vernal zephyrs blow,
That still the vine its fruit shall yield,
When autumn sunbeams glow.

Then, child of that fair earth, which yet
Smiles with each charm endow'd,
Bless thou his name, whose mercy set
The rainbow in the cloud.

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LITERARY NOTICES.

THE DISTICT SCHOOL; by J. ORVILLE TAYLOR, 1 vol. New York: HARPER & BROTHERS.—This admirable volume, of which we have before spoken more than once, is now out. It is very creditably published by the Harpers, and we again commend it to general circulation.

Its aims, its execution, and the interest which the community at large have in becoming acquainted with it, are all so well set forth in the annexed preface, —written at the request of the author for the work by JOHN DUER, Esq.—as to supersede any remarks of our own, and sanction the transferring to our columns of the whole of that

PREFACE.—It is to parents and teachers, and in a measure to legislators, that this work is addressed; and on the minds of those who will read it with the necessary attention it cannot fail to make a most salutary impression. The title is modest and unpretending; the style though eminently clear and forcible, plain and unlabored; but the subjects of which it treats, and well and ably treats, are of the very highest importance,—far more important than the topics which are usually discussed in our halls of legislation, and which, dignified by the eloquence of statesmen, and exagerated by the arts of popular declaimers, have sometimes fixed the attention and agitated the passions, of the whole community. The reflections of the author are evidently the combined result of experience and extensive and accurate observation; and he writes with that earnest simplicity which is the never-failing proof of sincerity, and which, it may be hoped, will transfer to the minds of his readers a portion of his own generous and disintetested zeal,—his zeal in the cause of public improvement and general happiness,—the cause to which he has consecrated his talents, his attainments, and his future life.

Entertaining this sense of the value of his work, I have felt it a duty to comply with the request of the author by contributing this brief preface; nor have I been unwilling, I confess, to connect my name with a publication which, should its circulation be as extensive as it may, and ought to be, will perhaps mark an era in the history of public instruction.

To inforce the duty and necessity of extending to all the benefits of education, in the full and true sense of the term,—to expose the defects of the system of primary instruction which now prevails,—and to suggest some of the appropriate remedies, is the design of the work. On some of the subordinate topics of discussion, differences of opinion may and will exist; but all who are competent to judge, and will give their due attention to the facts which this book discloses, must unite in the conclusion, that our present system of popular education is radically defective. It is on this point chiefly that the public mind requres to be disabused; it is in relation to this that there exists—I speak especially of this State—a very general delusion. We are told that under the fostering patronage of the government, more than half a million of children are taught in our common schools,—our pride, as citizens of the Empire State, is gratified and we content ourselves with the general statement, omitting to enquire, into the character and value of the instruction which is thus imparted; we know not, for we care not to know, that it is in truth so imperfect and scanty as hardly to deserve the name even of elementary—that it is unconnected with any thing resembling moral discipline or the formation of character,—that the teachers, inexperienced, transitory, snatched up for the occasion, are paid by salaries which hardly exceed the wages of the menial servant or the common laborer,—and that, as a necessary consequence, ignorant and disqualified, they are perhaps even overpaid by the pittance which they receive. Yet it is in such schools and by such instructors that thirty-eight out of forty of the children of the nation are, as we phrase it, educated. We have lived in a pleasing delusion; but it is time we should awake. It is time that we should cease to boast of the superior intelligence of the American people, as compared with that of the population of the Old World; we must no longer refer to our common schools as furnishing at once the evidence and explanation of the asserted fact; it cannot be concealed, and ought not to be denied, that under one of the most arbitrary governments of Europe, (despotic in its form, but in its present administration most enlightened and paternal,) the children of all, even of the meanest peasant in the kingdom, are receiving, in their village and parish schools, more varied and solid, and in every sense valuable, instruction, than any of our schools, I had almost said academies, are accustomed or competent to furnish! The fact is certain: what reflections must it suggest to the minds of Americans who truly honor and love their country and its institutions!*

It is to parents and teachers, as already stated, that the exhortations of the author are principally directed, and it is from their voluntary exertions that he seems to expect that reform, the necessity of which he has so clearly established. He admits that the school systems in active operation in many of the States are wisely organized: and that in many (meaning to include our own) "all that legislation can do has already been done." From this last opinion I am compelled to state my entire dissent. Looking to the models of Germany and France, no "system of public instruction" has yet been organized in any of the States, and in none has the appropriate work of legislation been more than commenced. I do not hesitate to avow the belief, that without regulations far more extensive than have yet been introduced,—a control far more enlightened and constant than has yet been exercised,—and fiscal aid far more ample than has yet been afforded, it is vain to expect that the character of our common schools can be truly and permanently improved. It is conceded by all that nothing can be done without competent teachers, and such teachers, in the number and of the qualifications required, we can never have, unless they are properly *trained*, and properly *examined*, and *watched*, and *controlled*, and, above all, properly *rewarded*.

Neither the districts, nor the towns, generally speaking, are willing or even able to select or reward such teachers, and still less to prepare them for their functions, and direct them in their labors. If good is to be done, we must bring our minds as soon as possible to the confession of the truth, that the education of the people, to be effectual, must here as elsewhere, to a great extent, be the work of the State; and that an expense, of which all should feel the necessity, and all will share the benefit, must, in a just proportion, be borne by all.

It is true that the public mind must be prepared for legislative action, and the belief of the value of that education which alone merits the name must be far more pervading & serious than it now is before legislatures will have the inclination or courage to act.

The dissemination of this book, and of the truths which it contains, will tend thus to prepare the public mind, to produce the right state of feeling and of thought; for assuredly it will not be read in vain by parents who are such in heart and in conscience, not in name merely.

There are some truths which it may be painful to confess, yet are most necessary to be known. To the reflecting and the candid it will not seem extravagant to say that the chief source of the evils, the disorders, the crimes which aflict society, is to be found in the heartless indifference of the higher classes, the rich, the educated, the refined, towards the comfort and well-being of those they term or deem their inferiors; and their consequent neglect of the intellectual and moral improvement of those who always have been, and it would seem by the order of Providence, always must be the most numereus class —those who depend on their daily labor for their daily support. It is this neglect, the alienation it produces, the ignorance it perpetuates, the vices it fosters, which leave marked the broad line of separation, on the one side of which are the few, indolent, disdainful proud, on the other the many, restless, envious, discontented. It is this which keeps the minds of the multitude in a constant state of irritation, and which when the base demagogue seeks to array the poor against the rich, collects the crowd of his willing auditors, and arms him with his dreaded power. It is this which caused the atrocities of the French Revolution, and which deepens and darkens the cloud that now hangs over England. It is this neglect—the grand crime of civilized and Christian society, which, in every country, sooner or later, and in none more certainly than in our own, if continued, is destined to meet a fearful retribution. Here most emphatically is it true, that the people must be raised to the level of their rights and duties, must be made the safe depositaries of the power which they possess, or in the history of other republics we may read our own fate:—first, lawless anarchy—next, the calm which fear and the bayonet produce—the calm of military despotism.

How then are these evils to be prevented?—this fate to be averted? I answer, all that is odious, all that is dangerous in the distinctions which the free acquisition and the lawful enjoyment of property must always create, will soon vanish, and all classes be united in the enduring bonds of sympathy and gratitude, when the rich (I include all who have the leisure or means to bestow) shall understand and feel that it is their paramount duty to improve the physical and elevate the moral condition of their fellow-beings, or, to express nearly the whole in one word, —to educate the poor.

Let those on whom the burthen ought to fall willingly assume—cheerfully sustain it, and there will be no further obstacle to the action of the Legislature, no further difficulty in organizing a system effectual, permanent, universal.

All that has been done in Prussia, and is about to be done in France, may be done here, and neither the patriot, the philanthropist, nor the Christian can desire more.

* The admirable report of M. Cousin to the French government, "On the State of Public Instruction in Prussia," the publication of which has excited so lively an interest in Europe as well as in France, has been lately translated by Mrs. Austin, the authoress of the very best translation in the English language,—that of "The Tour of a German Prince." This report, together with the admirable preface of Mrs. Austin, ought without delay to be republished in this country.

BELGIUM AND WESTERN GERMANY IN 1833, &c. &c.; by *Mrs. Trollope*, author of Domestic Manners of the Americans: 1 vol., 8vo. Philadelphia: *Carey, Lea & Blanchard.*—If, the author of this new tour puts, as she would seem to do, her claims to patronage for her books, on "the Domestic Manners of the Americans," we Americans may truly say, that we acknowledge benefits, though she may have intended none, from her aforesaid work. With much that was bad in purpose and in spirit, exaggerated in tone, and frequently mistaken, if not false, in fact, there is in the pages of the "the Domestic Manners" a great deal of wholesome truth and well merited satire. This, we know, is not very palatable doctrine, but we think it sound, and are sure that our national vanity, and sensitiveness to foreign opinions, need checking.

Of the Belgium, &c. we have little to say. It is pleasantly written; somewhat less than usual in the true *John Bull* style of finding nothing abroad as good as at home; and not purporting in a rapid summer tour to give absolutely a full insight into the Belgian and German character. We annex the concluding pages of the volume—epigrammatic enough —yet being testimony to one great truth, we so much desire to enforce in our own land, that popular education, as conducted and understood in Germany, is the only enduring source of power and content.

I have other reasons, still, for wishing my countrymen to visit Germany. I doubt whether there be any place on earth where at this moment so much precious wisdom is to be found;—and it is taught, too, in a manner the least unpalatable; for Germany follows not the custom of these latter days, but is more given to practice than to preach.

France, for nearly half a century, has been making herself heard among the nations; proclaiming aloud that she will give them such a lesson in political science, as shall render perfect the condition of man. There are some who still love to listen to her; but more, perhaps, who think she has yet to learn the mystery she is so anxious to teach.

For about the same period, America has been lifting up her voice to the self same tune—and there are some, too, who still listen to her. But, while the discordant accents of her motley race declare "Thrones, Dominations, Princedoms," to be pernicious excresences, there is a general feeling among the sober-minded, that she is talking of she knows not what.

Spain—proud Spain—reels to and fro; and staggers like a drunken man; and is at her wit's end.—She is tossed, as a buoy upon the waves, indicative of shoals, and, rocks, and wreck; but she has no light to lead any into port.

"Sad and sunken Italy, the plunderers' common prey," has neither power to give, nor to take counsel.

Gigantic Russia shines afar off—a thing to wonder at, rather than understand.

And England—England, who has stood unscathed,

while the whirlwind raged around her—how fares she in this "piping time of peace?" Truly, she is much in the state of lady Teazle's reputation—ill of a plethora. She has been triumphant—but the thought of it makes her sick. She has been free—but would mend her condition. She has drained wealth from the four quarters of the earth—but she would change all this. She must make alterations, grow slender, and cease to be sleek and contented, that she may be in the fashion.

And what has confederated Germany been doing the while? Storm and tempest have beat against her; but, true to herself, she has only risen stronger from the blast. The flood of war has swept over, but could not overwhelm her; and though nations, which bore not one half her burden in the struggle, are beat down to rise not again,

> "She tricks her beams, and with new spangled ore
> Flames in the forehead of the morning sky."

And why is this? Let us visit her well ordered cities—let us look at the peaceful industry of her fields:—and, though we shall perhaps find her talking and writing less upon government than most other nations, we may gain a lesson that shall help us at our need.

Yet Germany, too, is seeking to ameliorate the condition of man, and is foremost in the race of intellectual improvement. Let us visit her, and see what are the means she takes to ensure it. She turns not her strength to uproot and overthrow all that man, in his social state, has hitherto held sacred; nor does she labor to force Nature from her course, in order to make level that which the Creator has decreed shall rise and fall in ceaseless inequality;—but, with steady power, she pursues the only scheme by which man may hope to benefit his species. She gives her people knowledge, and suffers not either ignorance or tumult to banish "the sage called Discipline" from the land.

A Visit to Texas. 1 vol. Goodrich & Wiley, New York.—We know not who this traveller is, but his journal is a plain, straight-forward, unpretending one; and as it reveals a system of humbug on the part of "the Galveston Bay and Texas Land Company," we may do good service by copying the annexed statements:

On my return to Brazoria I found two gentlemen had arrived from San Felipe during our absence, and, with a wish to obtain all possible information concerning the nature of the land I had purchased, and particularly the title which I held, I songht them out. I was gratified to find that one of them was a gentleman to whom I had a letter of introduction, and from whom I had expected to derive the information I desired on arriving at San Felipe, whither I had designed to proceed, as I knew he had been there to make inquiries for himself, being interested like me in a purchase of the Galveston Bay and Texas Land Company. I soon ascertained from him that my worst fears were too well founded, and that my hopes were all fallacious. He had already renounced his own expectations, and lamented his disappointments.

I had now some painful and mortifying reflections to make after the receipt of the informatiun I had obtained in relation to the principal object of my voyage. I found that my confidence in the names of a few respectable individuals appended to the advertisements of a company, had betrayed me into mucn disappoitment, as well as some pecuniary loss. Although I could not doubt that men of honesty, on learning the state of the case, would be forward to repay me the money which I now saw that I had paid them for nothing, I could not look for an adequate renumeration for my travelling expenses, or the interruption of my business.

On an examination of the subject, with the facts now before me, I found such was the situation of things, that I derived no advantage whatever from the payment of money I had made, having not a foot of land, nor any claim to offer, superior to that of any other man who might come into Texas from a foreign country. I might easily obtain a quarter of a league of unappropriated land, on condition of professing the Roman Catholic religion, becoming a citizen of the Republic of Mexico, and residing on the soil for six years, receiving the title from the government; but not otherwise; and this was a standing offer to any person who might choose to accept it. In case of marriage, either before or after the contract, the amount was to be quadrupled. The government had never conferred on any individual or company the title to any extensive tract of land, or authority to stipulate for any thing beyond, or contrary to these conditions.

Maps of Texas published in the United States indeed represent the territory as almost covered with what are generally denominated Grants or Colonies: but they are neither one nor the other in the common meaning of the terms. I had been extremely misled on this important subject.

The Mexican Congress in 1824, passed a general law to encourage emigration, which they recommended as the basis of laws to be passed by the several states. The object of the plan was, to admit Roman Catholics of good character willing to become citizens of the country, but to exclude others. Such laws were passed by the States, and, among others, by that of Coahuila and Texas. Under this system the agency of contractors was engaged, who are called empresarios, or undertakers. To them were assigned the tracts improperly called grants or colonies, into which they were to introduce certain numbers of setlers, on specified terms. These were generally as follows: that if the assigned number were introduced, of the character and description required by law, within a special term of a few years, and became permanent settlers, without expense to the government, the empresarios should receive five square leagues of land for every hundred families introduced. The settlers, after proving their "religious" character, as it is called, (that is, furnishing evidence that they are Roman Catholics,) and after signing their contracts, &c, according to law, and paying certain charges, were to receive from the government a clear title: a single man to a quarter of a square league, and a married man to a whole square league.

Thus the settlers had not to purchase a title of the agent or empresarios, nor was the latter authorized or enabled to confer upon the settlers, either for money or for nothing, any advantage or benefit whatever, beyond those offered by the government, as just stated, to any applicants who would comply with the fixed conditions. It might be more convenient for strangers to obtain information through agents or empresarios; but they were not expected to obtain them under more or less favorable terms than if they made direct application to the state government through the proper authority. Settlers were not in fact, prevented from applying to which they might choose: for even in the tracts marked off on the maps to different individuals, the government exercise the right of settling as many as they please, and in terms claim the surplus after the stipulated number of settlers shall have been located, and the empresarios renumerated with the tracts. In some of them are also comprehended tracts conferred upon officers of the army, generally eleven miles square, and with titles vested, though they are still for the most part unoccupied.

Now, through ignorance of these circumstances I had been led into a foolish bargain, from which a plain statement like that I have here made would have saved me, if it had been made in season. Had the facts been distinctly published in the U. States, they would also have prevented many occurrences, much more to be regretted than the mere loss of time and money, which I had suffered. This statement I have now here brought before the public: so that if any one hereafter makes a wild goose chase of the kind, he may not, like me, be able to plead entire ignorance of the case.

In a subsequent part of the volume, the writer adds, "that on his return to New York, he got neither remuneration nor sympathy from the Trustees of the Land Company, for his fruitless expenses and disappointments."

We were quite amused with our traveller's adventures with his "white mustang," the little wild horse of the country, and at the tricks and knowing character of those animals. Take the following as an instance. The "white mustang," at a moment when it was urgent for his master to proceed on his journey, seemed very ill—refused to eat, and, to all appearance, was going to die. Thinking, however, his horse might as well die on the road as in the pasture, the traveller resolved to push on.—The sequel is thus naively told:

We took our departure accordingly; and I had much dificulty in getting my horse out of the town. In a short time, however, he began to cheer up, and gradually quickened his pace until his strength and spirits were quite restored, and he travelled remarkably well. However strange it may seem, there was every appearance that the whole affair had been a mere trick of the wily brute; and my opinion was confirmed by several inhabitants to whom I afterwards recounted the story. They told me that the sagacity and duplicity of the mustang is well known among them, and that he is capable of almost any thing, which ingenuity or malice can invent. So ungrateful a return for all my kindness and care, under such vexatious circumstances, and aggravated by such persevering imposture, added to my previous dislike of the animal which had been guilty of it.

The Works of Mrs. Sherwood, Vol. VI. Harper and Brothers, N. Y.—Another volume of this handsome, uniform stereotype edition of Mrs. Sherwood's works is here before us; and claiming, like all before it, by its contents and its mechanical finish, the support of the reading public.

The American Musical Journal, No. I. Vol. I. N. Y., Jas. Dunn.—We have looked over this first number of a new and much needed periodical with satisfaction. It is well done as to selections and original matter, and as to the mechanical but not unimportant parts of paper, type, &c.

The purpose is in a monthly 4to, of 24 pp. letter press, and eight pp. of music, to furnish choice pieces of music and criticisms, biography, anecdotes and narratives of remarkable musical performances, composers and performers.

Among the selected articles in this first number, is a very interesting memoir of *Handel*, and an account (abridged) of the late Musical Festival at Westminster Hall. Among the original matter, is a general review of musical performances in New York during the past year—not forgetting the single combat between *Gambati* and *Norton*, a matter treated in the right tone; and by which, by the bye, it is stated that each party pocketed $530.

It was a more profitable and pleasant "duello" to the parties than is usual in such cases.

We are glad to see this well got up Journal, and commend it to our musical readers.

Cecil Hyde, 2 Vols. Philad., Carey, Lee and Blanchard.—Without the spirit, the knowledge, or the pathos that belongs to *Pelham*, this novel dwells upon scenes of as lax morality. It is made up of incidents purporting to be familiar in the high life of England; but which it will neither profit the taste, the understanding, or the principles, of American readers to become familiar with. Wherefore we pass by *Cecil Hyde* without further notice, and recommend others to do likewise.

Poems, Translated from the French of Madame de la Mothe Guion; by Wm. Cowper, Esq. &c. &c. 1 vol. New York: Mahlon Day.—This is a republication from a little book that appeared more than thirty years ago in England, and presents the author of 'The Task' in the light of a successful translator of some religious French *Cantiques*. There are some original pieces, also, of Cowper's, and the whole is concluded by what is called "A Wreath of Forget-me-nots," or translations from a German religious poem, by *M. Yeardly*.

We conclude our Review to-day with the following unpublished *poem* by *Cynthia Taggart*, whose genius and whose afflictions have before interested our readers:

THOUGHTS ON AFFLICTION.

"Heaven sends misfortunes; why should we repine?
Can we escape the chastisement divine?
By fretful mourning through each trying hour,
Can we divest Omnipotence of power?
Be patient, and adore that Sovereign God,
Who rules the nations with an iron rod;
Breaking the flinty breast and stubborn will,
His grand designs of mercy to fulfil;
That we our guilt may own, and feel our need,
Bow to Jehovah, and for mercy plead.
His mercy's sovereign breath restores the soul,
And His own presence makes the sufferer whole.
Then why repine, or fretfully desire
To live in ease, and like the fool expire.
Beneath eternal vengeance, who can dwell?
And who but dreads the burning lake of Hell?
Are our hands strong; or can our hearts endure
The day of wrath that hastens and is sure?
Omnipotence no succor then can give;
The great Redeemer's thou wilt not receive,
The soul-keen anguish must forever bear.
No respite, no reprieve, no pardon there.
Though here we suffer, yet we can enjoy
A moment's respite, and our thoughts employ

On themes that may relieve: but ever there
Unuttered woe and infinite despair.

TEXAS.—We annex a statement from the trustees of the Galveston Bay and Texas Land Company, in reply to the extract published in last Saturday's Review from the book called "a Visit to Texas." We have also seen a copy of the certificate referred to, which no one certainly could understand as conveying any title to land, or any other advantage, than that of a permission to settle on the lands in question, after fulfilling the requirements of the Mexican law:

To the Editor of the American:

SIR: We send you a card for publication, in answer to the statements in extracts in your paper, from a book entitled "A Visit to Texas," and we request you to insert it. We will be responsible for its contents. Very respectfully yours, &c.

ANTHONY DEY,
G. W. CURTIS.

P. S. The other Trustee, Gen. Sumner, resides in Boston, or he would also sign this request.

A CARD.—In reply to the author of a book called "A Visit to Texas," so far as he has made imputations against the Galveston Bay and Texas Land Company and their Trustees, the public are referred to the certificate given by the Trustees, to this person, (if he had any) and to all others holding the same; and it will be seen that it porports no sale of land, but a permission to enter the Colonies, and acquire land according to law. The law is exhibited in a pamphlet published by the Trustees, and could have been seen by all, previous to an embarkation for Texas. That this person was met by a military force to resist his occupation of the lands, was a misfortune to him, and a deep one to the Company; and is not attributable to them. This was a violation of right, the result of the arbitrary and military government then existing in Mexico; and was a state of things not likely to exist again.

All obstacles to settlement are now removed, and any person holding the scrip of the Company can obtain lands according to the tenor of the same. But the law in favor of Empresarios is clear, that no one can receive title within their boundaries without their consent; and this law can be seen on application at the Office of the Company.

The Trustees know not who is the author of the book, but will test the truth of his statements in relation to them by a legal inquiry.

All persons feeling an interest in these lands, can obtain information of the most satisfactory character relative to the title at the Office of the Company, No. 65 Cedar street, New York.

We also publish, in an editorial column—though in fact it is an advertisement—a notice from an authentic source, of Texas, its soil, climate, produce, &c., which may interest some of our readers.

[FOR THE NEW YORK AMERICAN.]

TEXAS.

This interesting country, at the present moment, attracts so much attention, and calls forth so many inquiries, that we are assured we shall render an acceptable service to the public in presenting the following information, derived from a source of accurate personal knowledge.

Under the Spanish dominion, Texas was a separate province, occupied by three military posts, La Bahia, St. Antonio de Bexar, and Nacogdoches; and settlements of Mexicans were formed around each, which grew into a considerable town at Bexar, of about 3000, and at Nacogdoches and La Bahia into villages of about 500 and 300 inhabitants. This number has not increased, and forms at present nearly the amount of the Mexican and Spanish population in Texas; an addition of 1000 would include the whole.

The country at large, in all its beauty and fertility, was left unoccupied, except by the wild horse, the deer, and the buffalo; all of which, amidst luxuriant natural pastures, have multiplied to an extent almost incredible. An intelligent trader among the Indians in the interior regions of that country, upon being asked, how many buffalo he had seen in one herd? replied, one million—meaning literally what he said; but it may be restricted to a declaration, that they could not be counted. The deer are still more numerous, and that noble animal, the horse, roves the country in gregarious masses, with all the pride and majesty of his ancestors. The progress of population has not diminished the number of either, but only limited their range.

Texas was but little known to our countrymen, until seen by the gallant bands who entered it, in aid of the patriot cause at different periods of the Mexican struggle for independence. They saw a country equal to France in extent, intersected with numerous rivers running hundreds of miles into the interior, producing in its various climate and soil, all the commercial staples of the whole American continent. They brought home this knowledge, and gave an account of its beauty, fertility and salubrity; and many were tempted to seek an abode there, in spite of the prohibition of the then existing laws.

Foremost in this enterprize was Moses Austin, who, about twelve years since, obtained from the Commandant at Bexar, permission to introduce settlers, repaired to the United States to procure them; but dying on the route, left his to son, Col. Stephen F. Austin, the fulfilment of his undertaking. On this gentleman's arrival at Bexar, he found the Commandant indisposed to comply with his engagements; and the revolution being accomplished, and a new order of things established, he determined to proceed to the city of Mexico, and there renew the proposal of introducing settlers into Texas. The result was the passage of a general colonization law, authorizing particular districts of country to be assigned to contractors who would undertake to populate the country. This law laid the foundation of a system which was made more liberal and extended by that of the State of Coahuila and Texas; under which were made the grants which have been the subject of so much enterprize.

Austin was the first to begin colonizing, and laid the foundation of the extensive settlements now existing in Texas. But others soon followed; and Zavala, Burnet & Vehlein were equally successful in their application for lands. They selected the district of country immediately on the boundary line of the United States, lying between the Sabine to the East, the St. Jacinto and Navoste to the West, and the Gulf of Mexico on the South, running North about 300 miles. Austin's settlement is contiguous, and lies on the western line of Vehlein & Burnet's, and embraces the rivers Brassos and Colorado. Grants have been made to others in different sections of the country more remote from our borders and all of good land. But the settlements from the Sabine to the Colorado being continued and nearer to us are better known, and can be described with more certainty.

Texas in general is a prairie country, having all the streams skirted by timber. This is more particularly its character after passing the Trinity, and as you advance to the northwest, the prairies are of vast extent. But in the grants of Zavala, Burnet and Vehlein there is less of prairie and more of woodland. They abound in beautiful natural meadows of dimensions from one to five hundred and a thousand acres, producing a luxuriant herbage at all seasons, but have a large proportion of woodland without under growth, affording fine pasturage and presenting the aspect of splendid lawns and parks prepared with the taste and labor of high cultivation.

On some of the rivers, the Brassos for instance, are dense forests, but they are never found on the high lands.

The mildness of the climate is such that no provision is made for horses, cattle, hogs, nor for any stock on a farm; Nature's ample store is sufficient throughout the year, and at all seasons they fatten on the natural pastures; of course they multiply rapidly, and Texas may be called the paradise of animals of the inferior order; and to man it is the land of promise.

That splended plant, the Indian Corn, grows throughout in perfect majesty, almost scorning the aid of the hand of man. From the gulf to an average distance of 70 miles, the country is level and forms the sugar district. At this point, about the latitude of 30 degrees, the surface becomes undulating and wheat, rye and oats can be raised; and one degree further north produces abundant harvests. Cotton is cultivated from the gulf to the Red river and yields largely, with a staple uniformly good; and near the gulf in length and fineness of staple, approaches the Sea Island Cotton. This is the great crop of Texas, and even at this period equals 10,000 bales. Sugar has for many years been made on the Trinity, within Vehlein's grant, and the cane ripens several inches higher than in Louisiana. Tobacco grows luxuriantly every where, and may become an important article of export. The grape is universal throughout the country and in great variety and sweetness. In Vehlein's grant an attempt has been made to cultivate the native vines, and the experiment has shown that wine of the best quality can be made from them, and we may promise ourselves at a future day, to have American wines from this country rivalling those of Europe.

But there is one remarkable character which it possesses over the country within the same latitudes in the United States. It is without swamps or marshes. Whatever insalubrity you find, arises from the inundations of the Spring season, and of course is confined to the rivers; and this ceases when you go about the flat country.

A country so inviting is of course rapidly settling, and it is estimated to have at this time a population of 3,000 Anglo-Americans. The Law of the 6th April 1830, which prohibited the citizens of the United States from entering the country as colonists being repealed, they are now going in and receiving titles to the finest lands in the world, at prices so low as to enable the poorest to acquire a large farm.—And a further inducement to emigrate to this delightful region is held out by the law now in operation forming Texas into a separate Judicial District, with a Judge of ability, a native of the United States; and an organization of courts similar to our own. The proceedings are required to be in the English language, and the right of trial by Jury secured in all cases civil or criminal. By another law it is declared that no man shall be molested on account of his religious or political opinions; thereby securing the rights of conscience and religious freedom. These two liberal laws were passed at the last session of the State legislature, and the first by the federal Congress, and approved by President St. Anna; showing fully the friendly feelings entertained towards Texas by the State and national authorities.

All is now quiet throughout the republic. Texas is never affected by the political changes and commotions in Mexico. The agitated wave is calmed before it reaches a shore so distant from the places where the storms arise. The disturbances which took place two years ago from outrages committed by the military have all subsided, and quiet long since restored. At present there is not a Mexican soldier in Texas, and it is more than probable that none will ever be sent there; certainly not beyond what may be necessary to protect the revenue.

The population of Texas is remarkably good for a border country. You cannot expect to find there the refinement and courtesy of older communities; but the virtue of hospitality is no where more manifest. Those who imagine that Texas is without the higher requisites for social intercourse are greatly mistaken. From the Sabine to the Colorado, and from the Nacogdoches road to the gulf, embracing the colonies of Austin and those of Zavala and Vehlim, good farms are opened, comfortable houses erected, many of them large and commodious, and inhabited by as intelligent and respectable families as any country can afford. Many villages have sprung up, exhibiting a growing commerce with its universal attendants, refinement and luxury. But this early and rapid advancement of Texas will not seem strange when we reflect that 3,000 Americans are there occupying a fertile soil under a genial climate, and with their accustomed energy and enterprize are developing the resources of one of nature's favored regions.

It may be well to add, that the mode of acquiring lands in the different colonies is simple, and the titles made secure and in fee. The assignment of lands has been to persons called Empresarios, (contractors) who stipulate to introduce a certain number of families within a given time, and no person can within this period acquire lands in the district of the Empresario without his consent. This consent is obtained by a certificate stating the family received and the quantity of land allowed them, which is presented to a commissioner appointed by the Government for making titles, who immediately orders a surrey, and upon its return, makes a deed to the settler and the title passes direct from the State to him. The law allows a married man to have not exceeding a Sitio, equal to 4428 English acres; and a single man with one fourth that quantity, with a privilege of extending it to a Sitio when he gets married; and a foreigner marrying a Mexican woman is entitled to one third more. On receiving the deed from the Commissioner the colonist takes an oath to support the constitution and laws of the country, by which two acts he becomes a citizen. There is no tax on land nor on any other property, and the emigrants are allowed to introduce all articles for their own use free of duty.

TEXAS.

THE undersigned, Attorneys and Trustees of Lorenzo de Zavala, Joseph Vehlein and David S. Burnet, and their associates, called "THE GALVESTON BAY AND TEXAS LAND COMPANY," formed for the purpose of colonizing the lands assigned to those Empresarios, give notice, that full preparation is made for the reception of all persons who wish to emigrate to Texas, and settle within their grants.

The grants embrace a large district of country lying on the

borders of the United States, between the latitudes of 29 and 33 degrees; and the salubrity of the climate, and fertility of the soil, allow of the cultivation of the vine, sugar cane, cotton, wheat, Indian corn, &c. &c., and their universal natural pastures afford ample subsistence for cattle and other stock at all seasons of the year.

The approach to the country is either by sea to Galveston Bay, or by the Mississippi and the Red River to Natchitoches, and thence by land fifty miles to the Sabine river, which is the dividing line of the United States and of the company lands. There is a good road from the ferry on the Sabine to Nacogdoches, 60 miles, through a well settled country; and the whole distance from New York may be performed in fifteen days.

The law of the 6th April 1830, which prohibited the citizens of the United States from colonizing in Texas, has been repealed, and the people of all countries, of good moral character, will now be admitted into the grants which the undersigned represent, without exception.

By a law of the last session of the Legislature, Texas has been organized into a separate judicial district; the right of trial by jury is secured in all cases civil and criminal; the proceedings of the courts are required to be in the English language, and a judge of ability, formerly an American citizen, has been appointed, who is now in the exercise of his office.

Captain Archibald Hotchkiss has been appointed the Agent of the Empresarios. He resides at Nacogdoches, a central point to these grants, and has there opened an office for the reception of colonists.

Major George A. Nixon, who has been appointed Commissioner of the Government for making titles to the lands, also resides and keeps his office at Nacogdoches.

According to law, no person can settle in any Empresario contract without the consent of the Empresarios, and this consent is an indispensable prerequisite to obtain a title from the commissioner of the government. The scrip, or certificates of admission into the colony, which have already been issued, convey this consent, and the holders thereof will now receive title agreeably thereto for the quantity of land allowed by law, which does not exceed a sitio, or a quarter of a Mexican township for a colonist with a family, and a fourth part of that quantity for a single man; and by the 10th article of the law of the State of Coahuila and Texas, passed the 26th March, 1834, it is declared that no person shall be molested on account of his religious or political opinions, provided he does not disturb the public order; and by the same law, a foreigner holding land, and taking the oath to support the constitution and laws, becomes a colonist and a naturalized citizen.

The Trustees have in their possession documents to be shown to all persons, setting forth the fulness of their title; and will furnish those who are disposed to emigrate, and are not already provided, with scrip, or certificates of admission.

The Trustees will soon have agents stationed at New Orleans, Natchitoches, and Anahuac, on Galveston Bay, to facilitate emigrants in their journey to the lands of the company; and as soon as they are appointed notice will be given.

For further information, apply at the office of Company, No. 63 Cedar street, New York, or to William H. Sumner, Boston.

A. DEY, } Attorneys
W. H. SUMNER, } and
GEORGE CURTIS, } Trustees.

New York, 30th Sept. 1834.

At a meeting of the *Directors* of the Galveston Bay and Texas Land Company, held on the 29th September, 1834—present John Haggerty, George Griswold, Stephen Whitney, and Charles A. Clinton,—the report of the agent of the company, recently returned from Mexico, having been read and considered, it was, on motion,

Resolved, that the foregoing advertisement of the existing state of the Company affairs in Texas be published for general information in such newspapers in the United States, as the Trustees think expedient. By order,

WM. M. WILLSON, Sect'ry.

TEXAS.—The subscriber, having entire confidence in the title to the Lands of the Galveston Bay and Texas Land Company, of which he is a Trustee, will guarantee, if required, all scrip which he may sell on his own account; and will contract for colonists to be put on the lands. Apply (post paid) at the Office of the Company, No. 63 Cedar street, New York.

oct3 1m A. DEY.

SUMMARY.

ARRIVAL EXTRAORDINARY.—The Chinese lady with small feet, from three to four inches in length, arrived lately in the Superior, from Canton. She will, we are informed, be ready to see company next week.

Three blooded horses, (Chateau Margaux, Claret, and a brood mare) imported in the Hark Away, from Liverpool, by Messrs. Avery, Merritt and others, were landed safely from the ship, and arrived at Petersburg on Saturday evening.

We are requested to say, that passengers for New Brunswick, will leave New York in the steamboat Independence, at 6 o'clock, A. M. until further notice—to commence on Monday 20 inst. The 10 o'clock boat proceeds only as far as South Amboy.

[*From the Pensacola Gazette, Oct.* 4.]

NAVAL.—The United States Sloop of War Falmouth, and the Schooner Experiment, dropped down to the Navy Yard on Wednesday last. The former will proceed to sea as soon as she shall have shipped the necessary provisions for a cruize.

Garrison of Key West, F. }
Sept. 21, 1834. }

To the Editor of the Pensacola Gazette.

SIR:—C. A. Thompson, late a passed Midshipman of the Navy, passed through the garrison early this morning, his actions were such as to create the belief that he was deranged. Two of the non-commissioned officers went in pursuit and found him in the edge of the woods just expiring.

Please insert this for the information of his friends.

Very Respectfully T. PAINE, Lt. U. S. Army, Commanding.

The Catholic Archbishop of Baltimore, the Right Reverend *James Whitefield*, died in that city on Sunday last.

He was by birth an Englishman. It is said of him, by the Baltimore American, that "his fortune was considerable, and it was generously consecrated to the purposes of religion. The Cathedral experienced his liberality, and the beautiful edifice of St. James's in our city, is a lasting monument of his munificence. Of him may be said, what can be said of few—he entered the career of honors in wealth, and left it poor."

Consecration.—The Church of Epiphany, located at the N. W. corner of Chestnut and Schuylkill Eighth streets, Philadelphia, was consecrated in a solemn and appropriate manner on Saturday last.—This is a beautiful edifice, and being the only church in Chestnut street, and with one exception, the only one in Philadelphia, west of Broad street, promises to succeed beyond the most sanguine expectations of the enterprizing gentlemen who were instrumental in building it. Its location immediately opposite Colonnade Row, and in a section that is rapidly improving, will materially tend to its success. The pastor, too, the Rev. Dr. Tyng, is one of the most eminent and popular of the Protestant Episcopal clergymen of that city. We are glad to learn that the congregation is already large, and it will, no doubt, rapidly increase.

Falling in of a Church.—The Lynchburgh Virginian says, that at about 9 o'clock on Sunday morning, a few weeks since, the second Presbyterian Church in that town, the basement story of which is brick, and the upper part of wood work, suddenly parted at the top of the walls, and the rafters, joists, &c. fell in with a dreadful crash, and strewed the whole interior with fragments of the ruins. The building is of very recent erection, and had given no indications of its frailty. Divine Service had been held in the church on the evening previous to the catastrophe; and it is fearful to contemplate the calamity that would have resulted, had the building fallen an hour or two later, as the Holy Sacrament of the Communion was appointed for that day.

THE COTTON CROP.—Clayton & Burrritt's annual statement of the cotton crop, appears in their Shipping and Commercial list of Saturday. They make the whole crop,

	Bales.
From Gulf of Mexico, - - -	641,435
Atlantic, - - - - -	563,959
Total, - - - - -	1,205,394
Exported, - - - -	1,027,429
Consumed, - - - -	196,935

This crop has proved to be 134,956 bales larger than that of the previous year which was itself more than 30,000 bales larger than any previous crop.

The consumption in this country appears, from the statement, to have been about the same with the previous year, the whole increase having been exported. Yet so great has been the increase of cotton manufacturing abroad, that the stocks remaining on hand at the end of 1834, will probably be a good deal less than were at the end of 1833.—[Journal of Commerce.]

BUSTS FREE.—Orders have been received from the Treasury department, based on the decision at Boston, directing that all leaden busts should be given up to the importers, and no further questions asked.—The fine arts will suffer dreadfully by this decision. Busts of Jackson, Van Buren, and all the great men, cast with such accuracy as, with a label attached, to be recognized by every body, whether acquaintances or not, will now be put into the melting pot, and under the hammer by thousands, and ignominiously treated as mere pig lead. This is as it should be. Whenever principles are settled by a suit, the government should cease its litigation. Instead of this, however, we have, in many cases, the same principles tried over and over. The iron case which was tried last week and decided in favor of the claimant, was as much like one before decided, as one bean is like another. The iron was bought of the same manufacturer, at the same price, and imported and entered in exactly the same way. We are glad to learn that since this second decision, an order has come from the Treasury to prosecute that point no farther. If the Secretary of the Treasury will look into affairs in this district, he will find a considerable number of old cases which were formerly prosecuted for no good purpose and in which great wrong has been done to individuals, and will continue to be done until the legal decisions upon them shall be honorably complied with.—[Jour. of Com.]

OFFICIAL.—Organization of the Marine Corps under the Act of Congress of the 30th June, 1834.

One Colonel.—Archibald Henderson.

One Lieutenant Colonel.—R. D. Wainwright.

Four Majors.—Samuel Miller, Lieutenant Colonel by Brevet. John M. Gamble, Lieutenant Colonel by Brevet. Samuel E. Watson, Lieutenant Colonel by Brevet. William H. Freeman, Lieutenant Colonel by Brevet.

Thirteen Captains.—Charles R. Broom, Paymaster and Lieutenant Colonel by Brevet, Levi Twiggs, John Harris, Thomas A. Linton, James Edelin, Parke G. Howle, Adjutant and Inspector. Elijah J. Weed, Quarter Master, William W. Dulany, Thomas S. English, George W. Walker, Ward Marston, Charles C. Tupper, A. A. Nicholson.

Twenty First Lieutenants.—James McCauley, Captain by Brevet; Benjamin Macomber, Captain by Brevet; A. N. Brevoort, Captain by Brevet; Andrew Ross, Richard Douglass, Job G. Williams, Alvin Edson, Horatio N. Crabb, Henry B. Tyler, Joseph L. C. Hardy, George F. Lindsay, Landon N. Carter, John O. Reynolds, Henry W. Fowler, Francis C. Hall, Thomas L C. Watkins, F. N. Armstead, George H. Territt, William E. Stark, and Nathaniel S. Waldron.

Twenty Second Lieutenants.—William Lang, Jacob Zelin, Jr., Thomas M. W. Young, George W. Robbins, D. D. Baker, Archibald H. Gillespie, Geo. W. McLean, Benjamin E. Brooke, Edgar Irving, Jabez C. Rich, Thomas Theodore Sloan, Addison Garland, John Still, Louis F. Whitney, Frederick B. McNeill, John T. Sprague, Edward B. Grayson, Edward Lloyd West, Robert C. Caldwell, and John P. Dieterich.

Navy Department, Oct. 18, 1834.

[*From the Oxford Republican.*]

SERIOUS STAGE ACCIDENT.—The Catskill stage, while on its way to this place, and when near Unadilla, on the night of the 10th inst., met with a deplorable disaster. The horses took fright at some bloody cloths about a butcher's wagon which had been left standing by the side of the road—suddenly starting and precipitated themselves and the stage, which was loaded with passengers, down a deep declivity, by which one of the horses was killed, the coach crushed to pieces, and those within it more or less injured. Among them, we regret to learn, was Rev. Mr. Bush, of this village, whose collar bone was broken, and Mr. Cyrus A Bacon, of Owego, and formerly a resident here, who was severely bruised about the head. Mr. Bush was removed to Unadilla, where he still remains. The rest of the passengers who were sufferers by the catastrophe were enabled to proceed on their several destinations.

The steamboat *Nimrod* broke her crank on Sunday, near West Point, on her way down from Albany, having on board more than 300 passengers.

Signals were made to the Albany, then a few miles astern, to come along side and take off the passengers, but they were either unobserved or unheeded.

After the arrival of the Albany that evening, the Union steamboat was despatched, to bring down the Nimrod's passengers, and returned with them next morning.

The Steamboat *Union* in going up on Tuesday to Albany, in place of the Nimrod, broke her shackle bar off Yonkers. She was towed down that evening by the Champion.

We learn from the Wabash Courier, that the Elephant attached to the *menagerie*, while it remained in Coventry, Indiana, killed a man instantaneously, for having several times offered it tobacco. He had been warned to desist by the keepers; but did not regard their admonitions.

The same paper states that the Rhinoceros belonging to that company, died in Vermillion County, in that state, on the 26th ultimo. It was about three years old, one third grown; and in a very thriving condition.

Wm. Prince & Sons, proprietors of the Linnæan Garden and Nurseries at Flushing, have requested us to state that their new catalogues of Trees, Plants, and Seeds, *with reduced prices* will be sent *gratis* to every applicant throughout the United States, and elsewhere; and they ask the favor of all editors of newspapers to announce the fact, believing it will also be satisfactory intelligence to their subscribers.

[*From the Dunfries and Galloway Courier of July* 30.]

PAUL JONES—ARBIGLAND—AND LIEUT. PINCKHAM.

Towards the close of summer, 1831, the author of the following sketch received a note from a gentleman of the name of Pinckham, requesting an interview, and stating, among other things, that as an officer of the American Navy, he had obtained leave of absence for 12 months—the whole of which period, the inward and outward passage deducted, he intended to devote to the exploration of England and Scotland. A printed furlough, signed and sealed, according to the forms of the United States, the applicant was polite enough to inclose in his letter—to show, as he properly enough said, that he was "no impostor," but on the contrary a genuine representative, not certainly of a Royal but still of a most respectable and splendid Naval Service. The interview sought was of course granted, and from the first it was not difficult to learn that my friend, in crossing the Atlantic, had been chiefly influenced by a burning desire to visit the land of Scott and Burns, as well as the birth place of Paul Jones, whose memory he venerated to the point of idolatry, not only as a brother sailor and adopted citizen of America, but above all as the first man who *dared to hoist* the flag of Independence on the gigantic waters of the new world.

The vessel in which Mr. Pinckham embarked touched at Cork, and from that point our pilgrim wandered, in pedestrian guise, over a great part of Ireland, noting and treasuring many things for future cogitation. On this and some other occasions his outfit was the simplest that can be well imagined.—Perfect freedom and lightness were the great requisites the American studied; and hence his faded suit of blue uniform, knapsack containing a change of linen, materials for writing, and a few books and mathematical instruments. During his run through Ireland, he found much to admire: the vale of Avoca inspired his Muse, and he was equally charmed with th Lakes of Killarney, and the numerous intervening spots so graphically depicted in the following couplet:

> "The stalwart mountains league to bulwark in
> One little Eden from a world of sin."

From Dublin he found his way to Liverpool, and from the Mersey to the Nith. The captain of the trader in which he sailed discovered that he was a sailor, and on that ground, with true fraternal feelings, sternly refused to accept a single farthing in the name of passage money—an instance of generosity which Mr. Pinckham had never experienced in his own country, and one to which he frequently recurred as not only demanding a suitable return (afterwards made) on his part, but as in the highest degree honorable to the Scottish character. Towards the venerable relict of Robert Burns the stranger cherished feelings of the greatest respect, and having learnt that I might be useful to him in procuring an introduction, he applied to me by letter as has just been stated; and hence the accident by which I came in contact with an American tar of the right sort—a gentleman of probity, talent, and taste, whose appearance, mind, and manners, I shall not speedily forget.

At the period of which I speak Mr. Pinckham was not only prodigiously stout, but beyond all comparison the most weather-beaten man I ever beheld. Indeed I question whether Capt. Ross himself was a whit more so when he first arrived from the North Pole, and but rarely, if ever, has old Neptune had a fitter representative. His age might be thirty-two or a little beyond—his height five feet ten or eleven inches; and then such a chest, neck, and shoulders! Limbs more muscular I have never seen. A single glance riveted attention and convinced you that the owner was indeed a Hercules whom it would be dangerous to tamper with in a dark night and on a lonely road. Captain Brown rendered Dandy Dinmont especial service during his tussle with the gypsies, and though both are described as powerful men I question whether either of them would have had any thing to boast of in a mellee with the brawny American. Agile as powerful, his movements were totally unimpaired by fat: from the crown of the head to the sole of the foot he was one compact compound of bone and muscle, nerves of steel, and sinews of iron; and my impression was and still is, that Pinckham, had he chosen to turn his attention to a calling so disreputable, would have proved an over match for all the prize-fighters in England.—There is something truly spirit stirring in contemplating a noble specimen of manhood, and in Mr. Pinckham's presence I confess I felt as a dwarf at least ought to feel when confronted with a giant.

From the description thus given of Mr. Pinckham's outer man, it may be supposed by some that his Dirk Hatterackship in person bore some resemblance to the commander of the Black Prince in rudeness of manner and recklessness of character. But never was inference more unfounded. Gentler manners or a softer heart I have rarely, if ever, seen exemplified. During all my intercourse with him I never heard an oath escape his lips, or the slightest boast as to the perils he had braved, or the honors he had won. To me it appeared that his mind, if any thing, was over sentimental; and no one could have supposed, *à priori*, that a soul so refined lodged in a frame so masculine and weather beaten. Indeed, so far as I could judge, the stranger was a man of much sensibility, and had not only a fine eye for natural scenery, but was feelingly alive to the sublime, the picturesque, and the beautiful, whether as witnessed in the works of nature or reflected on canvass and through the medium of books. During his first visit to Dumfries my family happened to be located on the coast for the benefit of air, exercise, and bathing; and as I was thus somewhat lonely, I occasionally invited him to tea or supper. On these occasions the conversation turned chiefly on British and American literature, and more particularly the poets and belles-lettres writers of both countries. In this department of knowledge, he was quite at home, quoted readily and aptly, and although his taste leaned to the sentimental, evinced in all his remarks, critical acumen and sound discrimination. Sometimes, too, we talked of politics, and glanced cursorily at the Republican Institutions of America and the monarchy of Britain. And here I found my friend remarkably reasonable in his views and feelings. However warmly attached to the land of his nativity, he was not one of those who in their zeal denounce everything that is anti-American, and with difficulty admit that any good thing can exist on this side of the Atlantic.—On the contrary, he acknowledged that he had seen many things in Britain which challenged his warmest approbation, and repeatedly said that the spirit of partisanship was in itself an evil, and that great good might accrue to the whole human family, were mankind, in place of yielding to the feelings of Nationality, dispassionate enough to address themselves to the profitable task of comparing notes and of taking lessons from one another. Mr. Pinckham, I may further mention, frequently regretted that his education had been defective, and expressed so strong a desire to improve himself by every means within his reach, that I have no doubt whatever he will yet figure as an author himself, and add considerably to the stores of trans-Atlantic literature. During his sojourn in Dumfries he led a most active life, and in fact, never was a moment idle, except when cogitating with pipe in hand, in the snug parlor of his little inn; and on these occasions he reminded me of a sonnet written by Old Ralph, or Ebenezer Erkine, the burthen of which is,

> "Thus think, and smoke Tobacco."

During the day he made pedestrian excursions to the country, and carefully inspected every spot venerable from antiquity, or endeared by classic association.—Friars' Carse Hermitage, where Burns penned one of his finest moral effusions—Ellisland, where he resided, farmed, and composed, almost at a single sitting, "Tam O'Shanter," and "Mary in Heaven," Lincluden, which he loved and immortalized, with the opposite banks, along which he walked and pondered towards nightfall, while contributing so many lyrics to Thompson's Miscellany—were each and all visited in turn by the curious American; and even now when far away, if I may judge from his enthusiasm, are treasured and recalled as some of the "greenest spots in memory's waste." On other occasions he visited Newabbey, Bruce's Castle at Lochmaben, and Cearlaverock on the Solway, of which Gross weened so highly, that his drawing of its figures as the front piece to the Antiquities of Scotland—

> Cearlaverock! by the Solway's side,
> Great were thy pristine power and pride—
> When half the warriors of the land
> Woke when a Maxwell gave command!

At all the places mentioned the American executed drawings, and collected relics. On inspecting some of the latter I had considerable difficulty in preserving my gravity—so different is the domestic from the far-away feeling—and when I remonstrated against any farther accumulation, on the ground that they would render the wallet too heavy, he playfully said that nature had anticipated his new vocation, and moulded his shoulders tolerably well for the burden. Among other things, he told me that his father had commanded, for a number of years, a South Sea Whaler; that his mother, for a few seasons, accompanied him in some of his protracted voyages, and that in this way, he had not only been born, but cradled on the deep. But this arrangement was of brief duration; the domestic duties and care of her family soon conspired to keep the good matron at home; and, on one occasion, when his father traded to Britain, he brought home a copy of Burns' Poems, in compliment to his wife, who was of Scottish extraction. The good woman prized the gift highly, and young Pinckham was equally delighted. The possession of such a treasure threw an unknown charm over his existence, and the most thrilling moments of his life were those which he passed in perusing and re-perusing the Works of the Ayrshire Ploughman, until nearly the whole of them clung to his memory, and had become as familiar to the memory as a household word.

At length my friend, after having seen every thing noticeable in Dumfriesshire, called to take leave.—During every interview he had won my friendship more and more; and I confess a tear dimmed my eye as I cordially grasped his proffered hand, and reflected that ere long half the convex world would roll between us. On this occasion he tendered an address, which he said would find him in any part of America, and at the same time warmly invited me to visit the new world, and recommend intending emigrants to his notice. To accept such an invitation would be to me the highest gratification, but I fear the day of accomplishment is so distant as to be hopeless, although I have no doubt whatever, that the good Lieutenant spoke sincerely, and would realize, barring impossibilities, his promise of meeting me in any part of the United States, even if a thousand miles should intervene.

About six weeks subsequent to the period of which I am speaking, and while I was preparing to attend a horticultural society dinner, I received, not without surprize, a note from Lieutenant Pinckham, stating that he had returned to Dumfries, and wished to consult me upon an affair, which, to him at least, was of great importance. As my time did not admit of this, I, in a brief reply to this communication, invited him to attend the dinner as my guest, and before long had the pleasure of seeing him enter the room. In the course of the evening allusion was made to the stranger—a compliment which he acknowledged with his accustomed modesty, and with a degree of eloquence which at once pleased and surprized the party. Next day we entered on business, and before many minutes had elapsed I learnt the true secret of his re-appearance on the banks of the Nith.

On bidding adieu to Dumfries, as he believed forever, the stranger bent his steps in the direction of Arbigland, a beautiful estaste on the Galloway banks of the Solway Frith, and distant from Dumfries about fourteen miles. Nothing can be finer than the situation of Arbigland, with the sea in front, and Criffel in the rear, a very high mountain of solid granite, and the weather-glass of the country for many miles around—

> "When Criffel he puts on his hat,
> Screel soon hears word o' that."

From the top many wonders may be described, such as Goatfell, in the island of Arran, the whole length and breadth of the Isle of Man, many distant places in England, with other phenomena, strikingly illustrative of the principles of trigonometry. Skiddaw, Helvellyn, and Saddlebac tower right in front, and when sun-lit and furrowed into mile-long shadows, seem to be nodding recognition to their brother mountain that bulwarks so imposingly the Scottish strand. Arbigland is admirably wooded and sheltered, and commands the most delightful view of the coast of Cumberland—distant in a direct line little more than a dozen miles. Every sail that passes can be recognized; behind the lawns is a sheltered bay in which vessels frequently anchor for safety; from the shelving nature of the ground the tide rarely recedes so as to leave an unsightly waste of sand; and on some occasions in summer tall masts may be seen all but interlaced with the towering branches of living trees. Timber thrives charmingly, even where over-looking the deep green waters that ripple round its roots; and it would be difficult to name a spot where flowers, even of the rarest sorts, attain the same size, and possess equal richness of that tint and gracefulness of odour. The adjoining estate of Cavens, the property of Mr. Oswald of Auchencruive, is equally favored in this respect; violets and wild hyacinths spring up in myriads, and at the proper season it is impossible to visit either spot without recalling the well known passage—

> ——"Like the sweet south
> Fresh breathing o'er a bank of violets,
> Stealing and giving odor."

Shakspeare, on alluding to the Castle of Macbeth, and the instincts of the Martlet, says most beautifully—

"This Castle has a pleasant seat: the air
~~Priskly and~~ overtly recommends itself
Unto our gentle senses.
——— this guest of summer
The temple hunting Martlet, doth approve
By his loved mansionry, that the Heaven's breath
Smells woolngly here; no jutty frieze,
Buttress, nor coigne of vintage, but this bird
Hath made his pendant bed and procreant cradle.
Where they most breed and haunt I have observed
The air is delicate."

But powerful as are the instincts of the swallow-tribe they are perhaps surpassed by those of the starling, and it is impossible to pay a higher compliment to the climate of the parish of Kirkbeam than to say that starlings, though migratory in other places, remain stationary at Carvens and Arbigland during the greater part of the year, and build in the woods in considerable numbers. The young when fledged are highly prized, and bring handsome prices on account of their musical and speaking powers. Nor is Arbigland, amidst much that charms the eye and gladdens the heart, by the happy intemixture of wooded mountain, and marine scenery, altogether wanting in classic association. It was here that Paul Jones was born, and that Allan Cunningham first saw the fair one whom he afterwards married.—It was here, too, that the late Dr. Edward Milligan grew to man's estate, studied with all the ardor of a Joseph Scaliger, and hewed for himself a path to eminence, amidst obstacles as formidable as the compact granite of his native Criffel. The father of John Paul was gardener at Arbigland, and the present proprietor, D. H. Craik, Esq., when a boy, sometimes accompanied him in a ramble to the mountains, and when tired was carried on the future admiral's back. Carsethorn, a small adjoining seaport, forms part of Mr. Craik's estate, and in all probability it was by seeing ships and conversing with cabin boys, that the man whose name has been so much renowned, abjured all thoughts of his father's trade, and betook himself in the merchant service to a seafaring life. Even when very young he exhibited many proofs of decision of character, and of that power which a strong mind exercises over weak ones. His playmates were drilled to the strictest subordination, taught to manœuvre their cock-boats *secundum artem*, and mimic the turmoil of a naval battle, while the future hero stood on some eminence and sonorously gave the word of command.—All this of course happened many years ago, and when Mr. Pinckham visited Arbigland, the cottage in which his adopted countryman was born, was roofless and a ruin—a spectacle which affected him even to tears. Having made a drawing of it, he withdrew slowly, and not without casting many a wishful look behind, until at length some undefinable feeling shaped itself into a determination to repair, if permitted, at his own expense, a ruin so interesting. Still there were many difficulties in the way. Of the proprietor he knew nothing, and durst not introduce himself, and even had he been bold enough to do so, he considered it the reverse of probable that Mr. Craik would listen favorably to the singular request of a weather beaten stranger. Under these impressions he prosecuted his journey, visited the land of Burns, Glasgow, Greenock, Loch Lomond, Loch Katrine, and the western Highlands, and was in good hopes all the while that the romantic wish he had formed would in the end wear off.

From Stirling he embarked in a steamer for Edinburg, and found much to admire in "the City of Palaces." But as his time was limited he again bent his steps southward, and threaded, as was his custom, in pedestrian guise, the classic vales of the Tweed and the Yarrow. With Melrose and Dryburg he was greatly delighted; while, on the other hand, he experienced the keenest disappointment when he discovered that the waving broom of Cowdenknows, which his imagination had painted so long and yellow, exists only in ballad history, and has long been displaced by fertile crops of wheat, oats and barley. Arrived at Abbottsford, he addressed a note to its illustrious owner, who was then in very delicate health, intimated his profession, his object in wandering so far from home, and requested an interview "were it only for a minute." But kind and indulgent as Sir Walter was, he found it necessary to deny the boon craved—a refusal which preyed on Pinckham's spirits, and to which he often reverted in terms approaching to bitterness and anger. In this we considered him somewhat unreasonable; it is true he had travelled far, and might be pardoned in craving a passing glance of the most illustrious man of his day; but thousands on thousands have cherished similar feelings, and literary enthusiasm seems to have blinded my friend from the fact that public curiosity is one of the heaviest penalties that attaches to greatness. Of the Ettrick Shepherd he had often heard, and was well acquainted with his poetical works; but before he reached Altrive Lake the day was so far spent that he requested a knot of persons he overtook on the road, to direct him to some cabaret where he might lodge for the night. But there was no such place at hand excepting one, previously engaged; and as he was too modest to intrude on Mr. Hogg at such an hour, he entered a small plantation, selected the driest spot he could find, hoisted and laid flat his umbrella as a protection to his head, and stretched himself at rest with the greatest sang froid—his bed the cold earth, and his curtains a leafy screen and the open sky. To ordinary men the consequences of such an experiment would have been a terrible cold, asthma, or consumption; but the Lieutenant is so far from being an ordinary man, that in as far as physical strength goes he might have figured as henchman to the hardy chieftain of whom Sir Walter Scott tells the following story. During a winter hunting excursion old Sir Ewen Cameron of Lochiel, was overtaken by night, lost his way, and having no cover to flee to, was compelled to call a halt and desire his tail to rest as they best could till the following morning.—Snow covered the ground; but as this was nothing in the days of thews and sinews of iron, highlander after highlander wrapped themselves in their plaids, and slept more soundly on a heathery couch then bilious citizens sleep on beds of down. Among the party there happened to be a young man, grandson to the chieftain, who, with the view that his head might lie higher than his feet, was observed rolling a quantity of snow together. But the wrath of Sir Ewen was roused by what he conceived to be a system of degenerate luxury, and rising from his lair, and kicking the frozen snow ball from the head it supported, he exclaimed, *Out upon thee, art thou become so effeminate as to require a pillow?*—Mr. Pinckham, however, escaped the snow, and tired as he had been with the fatigues of the day, enjoyed the most profound repose until the song of birds, the bleating of sheep, and the busy hum of industry awakened him to the enjoyment of the scenery of a sweet pastoral valley, arrayed in all the matron graces of autumn. Previously it had been too late, and now it was too early, to wait upon the shepherd; but it was easy to while away the time by strolling as far as St. Mary's Loch—a sheet of water, beautiful in itself, which has long been married to immortal verse in the writings of both Scott and Hogg. At a fitting hour Mr. Pinckham met the author of the Queen's Wake, and apologized for the unshaven chin, and general dishabille, by stating that he had been in camp and not in quarters, and that camp not one of the most comfortable. Our old friend may have his failings, like other men, but inhospitability is not one of them, and again and again he expressed his regret that the stranger had not come to him at once, in place "o'lying out-bye like the gipsey bodies, and wi' far fewer haps than they carry in their creels." A splendid Scottish breakfast followed, to which the Yarrow lent its aid in the shape of trouts caught by the Shepherd's own hand; and after much conversation mine host was so much pleased with his guest that he gave him a lengthened convoy and the benefit of a half hour's crack on a sunny knowe overlooking the Loch of the Lowes, and its sister St. Mary's. These, and other facts, I learnt from my friend when he arrived in Dumfries; and now the great thing was to put matters in train for the execution of the romantic project he had formed. An introduction to Mr. Craik was immediately procured; but twice he had the misfortune to miss the proper opportunity of presenting it personally. But his enthusiasm, so far from being damped, rose with the occasion; and though he himself thought the scheme romantic, and had hoped that lengthened travel would banish the impression, he candidly confessed that it had deepened every foot he trode. On the third occasion, he saw the proprietor of Arbigland, was favorably received, and constrained to pass the day under his roof. From the first that gentleman had determined to grant the sailor's request; but the conversation for a long time ran on Paul Jones, America, and many other subjects, and the poor Lieutenant was beginning to despair, when, as by accident, allusion was made to the nature of his errand. Mr. Craik at once said that he was welcome to do what he pleased with the cottage, and but rarely have words more welcome and encouraging fallen upon mortal ear.

Mr. Pinckham was quite overjoyed, returned to town a happy man, and next morning deposited with the writer twenty-five sovereigns to be employed in the repairing the cot in which Paul Jones was born, so as to render it habitable. This, considering the mode in which he travelled, and the economy he found it necessary to practice, was unquestionably a great stretch of generosity—to say nothing of the hundred and odd Scottish miles he had travelled out of his way to give, if possible, a palpable form to his enthusiasm. As the season was then far advanced operations were delayed till the following spring, when estimates were received, and the house repaired in the most tasteful manner. And it is due to Mr. Craik to say that he by no means squared the expenditure by the sum received, but on the contrary gave freely from his own purse. The site of the cottage is a glade in a thriving wood on the shores of the Solway, with a green in front, fancifully railed in, and tastefully ornamented with evergreens, flowers, and flowering shrubs. Inside and out it is a trim cottage which may vie with similar buildings in England, and as the walls are whitened annually with the finest lime, it is become a sort of landmark to nearly every sail that enters the Solway. The widow of a fisherman who died under highly distressing circumstances, and who owes much to the humanity of Mr. Craik, tenants it rent free, and will probably close her eyes under its honored roof; and as this fact is generally known, almost every tar in passing the spot, doffs his bonnet in token of gratitude, and says "God bless the kind Lieutenant Pinckham."

☞ **TOWNSEND & DURFEE**, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norrist. Railroad

m1 1y

[*From the Boston Courier.*]

ELLA OF GARVELOCH,

ONE OF MISS MARTINEAU'S MOST INTERESTING AND BEST DEFINED CHARACTERS.

Methinks, e'en now I see thee,
Sweet denizen of yon rude isle,
Far, far away upon the emerald sea;
How firm, in majesty, thy form,
How bright, 'mid ocean's wildest storm,
Thy love enkindled smile!

There, as the coral flower?
Sublimely reared beneath the sunless deep,
Urged by affection's holy power,
Calmly thy duteous sacrifice was done,
Meekly thy wreath of heavenly glory won,
As infant's placid sleep.

Not for the world's behest
Did the bright curlew's plumes adorn thy hair,
But to wake joy within a gentle breast,
Where the spirit's light burned dim and low,
And the course of thought moved sad and slow,
While love was fervent there.

Gladly didst thou look out,
Upon the Stern—*his* lone loved eyry,
And wert glad at every merry shout
He joyous echoed to the wailing cry
Of the swift wild-fowl, circling by,
With startling minstrelsy,

Oh! there is beauty in a life
Of truth, unmarred by passion's shock,
Unstained with worldly strife,
And yet of sinewy virtue,—pure and free:
And such was thine, blest daughter of the sea,
The humble Garveloch! H. T. T.

UTICA AND SCHENECTADY RAILROAD COMPANY.

PROPOSALS will be received until the last Monday of October next, at 12 o'clock at noon—

For grading about sixty-five miles of the Utica and Schenectady Railroad, between the Sand Ridge on Sanders' Flats in Schenectady, and the western boundary line of the town of Herkimer;

For the masonry within those limits, embracing the culverts, and the abutments and piers of the repective bridges; and

For the wooden superstructure of bridges across the Cayadutta Creek at Caughnawaga, the Garoga Creek at Palatine Church, the East Canada Creek at Manheim, the Gulph at Little Falls, and the West Canada Creek at Herkimer.

The line will be divided into sections of about one mile each, and prepared for examination, and maps, profiles and plans deposited for inspection with W. C. Young, the chief engineer, at Schenectady, ten days previous to the time above mentioned.

Blank forms of proposals will be furnished at an early day at the company's offices at Schenectady, Palatine, Little Falls and Utica.

The names of persons to whom contracts are awarded (who will not be permitted to sub-contract the same) will be made known, at Schenectady on the 29th day of October, when it will be required that the grading proceed without delay, wherever, and soon as titles to the lands are acquired by the company; that the culverts and small bridges be completed by the first of August next; that the residue of the masonry and the large bridges be finished by the 1st of October thereafter; and that the grading be completed during the year 1835. Contractors to furnish security for the faithful performance of their contracts.

The use of ardent spirits to be prohibited in constructing the road.

Proposals, post paid, to be endorsed "Proposals," and containing the names of the persons offered as securities, to be addressed to the undersigned at Schenectady, or deposited at the company's office at that place. September 4, 1834.

G. M. DAVISON, Commissioner
s-17 to27 Utica and Schenectady Railroad Company.

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.
Tro N. Y. July, 1831.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

*** Mr. Thorburn is also Agent for the following publications, to wit:—NEW YORK FARMER and American Gardener's Magazine; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen, and obtained by those who wish them, by calling at 347 *North Market street, Albany*. tf

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y., by
A12 tf D. K. MINOR & J. E. CHALLIS.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Levelling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street,
J31 6t corner of Maidenlane.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13-1y

RAILWAY IRON.

☞ Ninety-five tons of	1 inch by	¾ inch,	*Flat Bars* in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.
200 do.	1½ do.	¾ do.	
40 do.	1½ do.	⅝ do.	
800 do.	2 do.	⅝ do.	
800 do.	2½ do.	⅝ do.	
soon expected.			

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2¼, 2⅜, 2½, 3, 3¼, 3½, and 3¾ inches diameter for RailwayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a 30

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.
December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J25 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

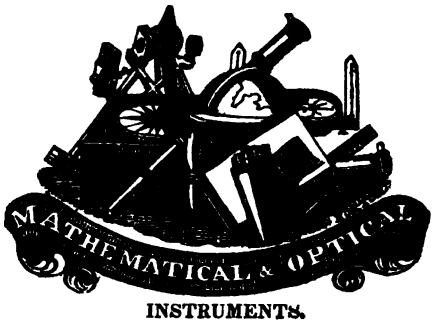
Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18



INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

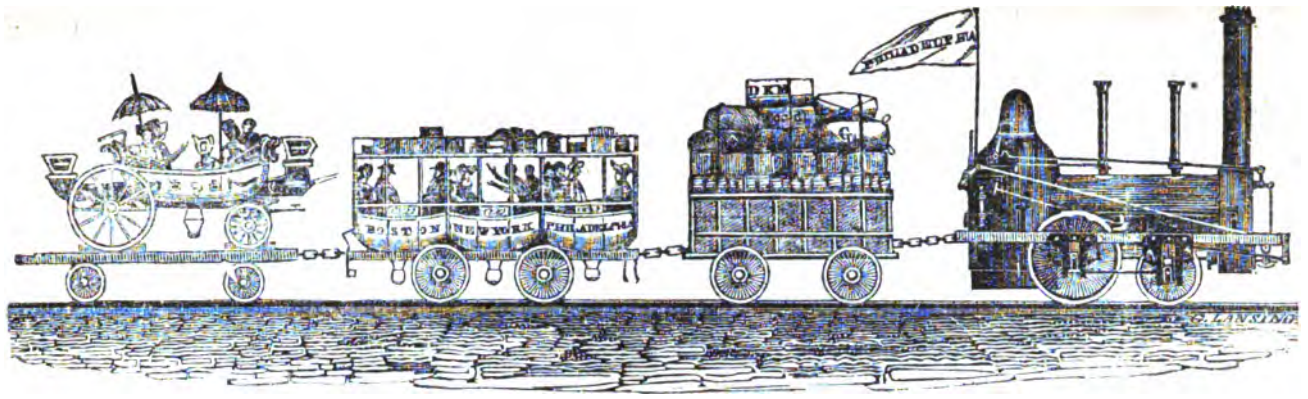
These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

S. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy submit them, upon application, to any person desirous of perusing the same. m25



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] **SATURDAY, NOVEMBER 1, 1834.** [VOLUME III.—No. 43.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 1, 1834.

Baltimore and Ohio Railroad.—The gross receipts on the finished portion of this road for the year ending 1st October, from tolls on passengers and merchandize, were $205,436. The items were 94,844 passengers, paying $89,181, and 561,121 tons of merchandize, paying $116,255.

Trenton and Philadelphia Road.—We understand that the whole line of the splendid Railroad between Philadelphia and Trenton will open for the first time early next week. This road is about thirty miles in length, and is one of the best constructed and most direct and level in the country—so much so, that it is calculated that the whole distance may be travelled, on extraordinary occasions, in about one hour. The usual time will in all probability be about an hour and a half.

A depot is in preparation in Kensington, where omnibuses from all parts of the city will arrive at, and depart from, with passengers.

From the forthcoming number of the "Mechanics' Magazine and Register of Inventions and Improvements."

It is with great pleasure that we insert the following from our esteemed friend, and we solicit the attention of all who are engaged in the construction of railroads to its contents.

We have no room this week for remarks, but shall recur shortly to the subject; in the mean time shall be happy to learn the opinion of some of our scientific correspondents.—[Ed. M. M.]

To the Editor of the Mechanics' Magazine:

My dear Sir,—Agreeably to your request, I now give you the particulars of my patent for the application of caoutchouc, or Indian rubber, in solution, to ropes used on the inclined planes of railroads, and shafts of mines.

My specification states that the ropes as now used on the inclined planes of railroads, by being exposed to the weather, are liable to decay and become rotten, as well as to great expansion and contraction, and that I propose to prevent such decay and variation in length, by covering said ropes, or the separate strands of which such ropes are composed, before being spun into ropes, or when so spun, but before being used, with caoutchouc, or India rubber, dissolved in the purified naptha of coal tar, in Barbadoes tar, in petroleum, in sulphuric ether, in spirits of turpentine, or in such other substance as possesses the power or property of dissolving caoutchouc or India rubber, and permitting it to dry into its hard state without being clammy.

In announcing my improvement to the public, through the medium of your valuable journal, Mechanics' Magazine, and Railroad Journal, I trust to your kindness to offer such remarks on its utility to parties interested in railroads with inclined planes already made, as well as those now making, that, by its adoption, an immense annual expenditure for ropes would be saved, and the dread of their breaking entirely done away with, thereby affording perfect security to passengers in passing inclined planes. Even the knowledge and conviction of that security may be the cause of constructing railroads with inclined planes in mountainous districts, where, without it, it would be looked on as impracticable. Your's, truly,

Patrick Mackie, M. D.

29th October, 1834.

All communications may be addressed to you, or to your humble servant at the Albany Hotel, No. 31 Courtlandt st., New-York.

[*Correspondence of the Journal of Commerce.*]

Rattlesnake Gold Mines,
Safford Co., Va., Oct. 7, 1834.

The following is a geological description of the gold regions of Virginia.

In passing from tide water to the Blue Ridge, the whole country is undulating, consisting of hills of moderate elevation, intersected with vallies or ravines of moderate depth. The soil for the most part is composed of bright red clay, highly colored with the oxide of iron, and formed from the decomposition of vertical laminæ of Talcose slate or schist. As you approach the metaliferous veins, this red clay becomes intermixed with fragments of quartz, comminuted by the action of the atmosphere, and mechanically spread upon the surface for some distance by the action of the rains and ploughing, and the like, from year to year. At the distance of sometimes a few inches and sometimes a few feet below the surface of this bright red soil, is found the talc or talcose slate, generally of a greenish grey color, soapy to the touch, and of a greasy lustre. This rock is the *Talkschiefer* of Germany, and is commonly known throughout the world in gold mining districts, as gold slate, or as the slate peculiar to gold regions. It is composed of magnesia from 30 to 40 per cent., silex from 50 to 60 per cent., and oxide of iron, allumine and sulphur, in small and variable proportions. The leaves or laminæ of this slate are vertical, and often intermixed with iron pyrites, containing gold in a foliated form, very much like thick gold leaf. These iron pyrites are generally richer in gold when found in the slate along side of a quartz vein. The quartz veins are vertical walls of white flint containing oxide of iron and frequently iron pyrites and specular oxide of iron beautifully crystalized.

The diameter of the quartz veins varies from the fourth part of an inch to six or eight feet. All these veins are found between and parallel to the layers of slate, and extend longitudinally in a direction 41 1-2 degrees North East. Sometimes the gold is found in quartz veins in large masses, and sometimes distributed through the same in fine grains, and hidden, as it were, by the oxide of iron. Frequently specimens of this kind are rich when no gold is externally visible. Sometimes the large or main vein is found to be rich, and then again the gold is absent from it altogether. In such cases the gold is generally found in parallel thread veins frequently at some distance from the large or principal vein. Sometimes these veins dip like coal strata, and pass under rivers and rise again; and again they are cut asunder by streams, and the rocks of the vein broken or ground to sand, by attritions, the gold washed down the stream in grains and overspread with gravel. As these grains of gold are indestructible, they are not unfrequently carried by currents and floods down into secondary regions, where they assist in forming new sandstone, conglomerate and the like. These deposits of gold are often very rich, and much of the gold of Virginia is obtained by carefully washing the sand found at the bottom of the gravel in the streams and low grounds.

Other metals are usually associated with the gold in the veins and in the slate. I have never failed to find a greater or less portion of silver. I have also in some instances, found copper and blende, antimony and galena. In many instances the sulphuret of iron or hepatic pyrites may be said to be the dwelling place of the gold.

This whole gold region is based upon granite, and evidently belongs to that formation which Professor Blumenbach denominates the second class of primitive rocks. As yet I have not discovered that they contain any organic remains.

Very respectfully yours, F. Shepherd.

[*From a Correspondent of N. Y. American.*]

NEW YORK AND ERIE RAILROAD.—The success of this important work may now be considered as certain. I met a few days since at Binghamton, with Judge Wright, who was then on his return from Lake Erie, where he had been to examine the route for the termination of the Railroad. He informed me that he had ascertained that the level of the lake may be attained without difficulty at about midway, between the villages of Dunkirk and Portland, and will probably be continued to each. The route of the western division is found to be highly favorable; passing up the Canisteo; thence to or near Angelica, in Allegeny county. The eastern section is still more favorable, if possible, I am also informed, than heretofore reported. I learned from Mr. Seymour, that its most sanguine friends will be disappointed in this part of the route, as but *one*, and possibly not even one, stationary power will be necessary to reach the Hudson River. The survey is now nearly completed to the river; and the maps and estimates will probably be ready at an early period of the session of the Legislature, when we shall expect to see a liberal spirit evinced by those whose duty it is to foster and develope alike the resources of every part of the State.

Now is the time, I think, to call another Convention upon the subject. Sufficient information may be laid laid before it to enable it to act understandingly as well as efficiently. It should be held on the line, say at Binghamton, or Oswego; and measures adopted to insure a full representation from the city and all those counties interested in its success. It would doubtless be well attended.

CHENANGO CANAL.—The Canal Commissioners met at Binghamton on the 14th instant to decide upon the termination of the Canal. Several routes were surveyed, and of course had their advocates; but the decision was a judicious one,—passing through the centre of the village to the point where the two rivers unite.

Account of a Visit to Mexico.

XALAPA, U. S. MEXICO, June 28, 1834.

To the Editor of the Mechanics' Magazine:

DEAR SIR,—You will recollect that we sailed from New-York on the 21st ult. for Vera Cruz. Nothing worthy of note occurred until the 2d of June, at which time we came into contact with a *water spout*, lat. 29° 3′ north, long. 74° west from Greenwich. The cabin passengers were below at breakfast. The second mate, who had charge on deck, gave us a sudden alarm, by hastily reporting at the cabin gangway, "A water-spout off the weather-bow, sir!" Those of us who were aware of the dangerous consequences of coming in contact with one of these aerial missiles of destruction, immediately arose from our seats and ascended on deck. Here we beheld a meteor, grand and beautiful indeed. It approached us in all its elemental grandeur, towering to the clouds, and looking down to scorn the power of man. Its distance from us, at this period, might have been about two miles, and, as the breeze was very light, we were completely exposed to its effects in case it should make towards us. It was watched attentively for a few minutes, when it was observed to settle very much, and, it was supposed, had broken. It was also judged that its course was such that it would not strike us in case of its renewal. We were shortly convinced of our error. The passengers were scarcely re-seated at the breakfast table, when the second officer again reported, "It is making for us, sir!" The captain immediately went upon deck, and in an instant after cried out at the top of his voice, "All hands on deck; passengers on deck to lend a hand!" I have said the wind was light; moreover, it was a leading wind, and previous to our seeing the water-spout, we had every sail set that could be made to draw. On the first call to deck, the studdin'-sails were taken in, so that at the last call by the captain, we had all other sails set, from royals downwards. On our reaching the deck the dreadful missile was not more than 100 fathoms from us. It had renewed its former height and magnitude, and came booming on at our devoted craft with a loud rushing noise, in all its terrific grandeur, threatening us with instantaneous destruction. To clue up sails was impossible, therefore every thing was "let fly," sheets, halyards, &c. All was now done that could be done. The state of suspense and intense anxiety for a few moments is more easily conceived than described. Some were at prayer, audibly or otherwise, and all were motionless. It came upon us midship, the first contact heeling the vessel to the leeward. When about half over, the vessel righted, and when it left us it gave us a heel to the windward. Not a sail was rent nor a spar carried away. Not a man was injured, neither did a drop of water fall on deck.

Previous to the water-spout reaching us it was thin—in fact, was easily seen through; but after it had passed it, seemed to increase in density and opacity; hence, agreeably to the best received theory, it is probable that the water-spout, at the time it struck the vessel, had not been in its renewed state (before alluded to) a sufficient time to have become mechanically charged with water, otherwise it would have burst upon us and inundated, if it had not destroyed us. The diameter of the spout at the bottom was about forty feet, and it was very attentively and closely observed as it approached. That it had all the characteristics of a whirlwind is certain, and the spray which was thrown off *tangentially* from its exterior, showed most conclusively that it gyrated in a *spiral* form, its motion being upward, thus raising water upon principles somewhat resembling those of Archimedes' screw. Its revolution was against the sun—i. e., from right to left. I do not mean to have it understood that I am by any means *convinced* that the water in these meteors is always *raised*; it may, and probably does, sometimes descend from the clouds. When the water is raised mechanically from the ocean, it will be salt; when it descends from the clouds it will be fresh; but we have so few authentic accounts of their *bursting on the ocean*, that I am inclined to the belief that they are neither more nor less than whirlwinds raising sea-water the same as they raise objects upon the land.

This spout was first seen at half past 7 A. M., and at this time the barometer was one-eighth of an inch lower than it was an hour before. Just previous to our contact, the barometer had fallen an additional eighth of an inch, and immediately after the spout had passed us it was the same. An hour after the last observation, the barometer had ascended to the same height which it had previous to the appearance of the spout.

The aspect of the heavens was cloudy, somewhat broken, but having little motion. Some of the clouds were more elevated than others, the cumulo-stratus and nimbus of Howard. No rain had fallen during the morning.

The following statement will exhibit at one view the states of the barometer and thermometer during the interval of time included in the above account, viz.:

	Barom. Inches.	Ther.
At half past 6 A. M. - -	29.75	71°
When the water-spout was first seen, at half past 7 A. M., 25 to 30 minutes before striking us, - - - - -	29.625	70.5°
Just previous to the spout's striking us - - - -	29.5	—
Immediately after do. do.	29.5	70°
One hour after the last observation, - - - -	29.75	71°

In the third observation the thermometer was not noted for want of time.

The above is only a slight additional proof of the immense value which the barometer has for purposes of practical navigation. It is true that experience and prudence in commanders of vessels often preserve them in dangerous circumstances by taking the necessary precautions, but this is no reason why every additional security should not be given to the lives and property of our seamen and merchants. Every vessel which traverses the ocean should have an accurate barometer, which should be carefully and punctually attended to, and registered in the log book.

Our passage through, or rather across, the gulf or bay of Mexico, was tedious and unpleasant, a remark that will apply to the whole passage from New-York to Vera Cruz; the weather being very warm, and our accommodations on board very much limited. I have heard the splendor and beauty of the tropical skies extolled so much and so often, that I took it for granted I was to have a feast of vision which would in some degree compensate for the inconveniences of an imprisonment of many days upon the domains of Neptune. But, alas, disappointment came. There is infinitely more splendor and *elasticity* (if I may be allowed the expression) in our northern skies, partioularly in a clear November night,. It is true, wesee some stars in tropical climes which are not visible to us at home; but there is a lassitude, a certain je ne scais quoi, that takes away all the zest for me.

On the 18th of June, we entered the harbor of Vera Cruz, very much to our gratification. I believe few persons could be found who would not prefer terra firma to the deceitful and treacherous gulf of Mexico. After having undergone an inspection by the visiting surgeon, and he having ascertained that there were no cases of cholera among us, the Vera Cruzans being very apprehensive of another visit from this Protean disease, we were permitted to land. Some of us had been unwell for a few days previous, owing to our having been becalmed and exposed to excessive heat for some days in the gulf. We were moreover informed that there were cases of vomito in the city, and therefore determined to remain on board a day or two, until we should become in a slight degree, at least, acclimated.

At sunrise the next morning, a scene, novel and very interesting to an American, presented itself to our view. The atmosphere was unusually clear and transparent, and a gentle sea breeze gave it a wholesome and grateful feeling. Directly in front of us lay the antique and ruinous looking city of Vera Cruz, with its gorgeous domes, and structures of various appearances, and architecture, mostly partaking of the Moorish style. In our rear lay the castle of San Juan de Ulua; on our left the mountain of San Martin, reaching to the clouds, with other mountains; and islands and bays of greater or less extent. In some of these bays, at a distance of from one to three miles, many fishing boats were to be seen, the crews of which seemed to be busily employed in their avocation. In a south-westerly direction the Orizaba, 17,400 feet in height, rose in all its majesty, its snow-capped summit poising its everlasting congelation far above the access of man. The rays of the rising sun were reflected from this peak in the softest roseate hues conceivable.

At the expiration of two days on board, we landed at the Mole, and, having passed the custom house without difficulty, took up our abode at a very neat and comfortable house, kept by Mr. Wm. Fulton, an American, whose politeness and attention are well calculated to insure custom, and give general satisfaction.

Vera Cruz is a regularly laid out city, its streets running at right angles to each other, and most of them are of a spacious width; some of the cross streets are, however, narrow and filthy; in fact much could not be said in praise of the cleanliness of any part of the city which we saw. The number of dead, and, of course, putrifying animals, and other filth, which lie in different parts of the city, would vitiate and

render the atmosphere unhealthy in a much higher latitude. The streets are well paved and have wide side walks, which are formed of a cement made with lime, sand, and shells, which acquires a peculiar hardness, and is very durable. I do not know that any particular proportion of these substances is required, and am inclined to believe the judgment of the maker is the guide. The houses of this city have all of them flat roofs, and are covered with cement; particular pains are taken to keep them perfectly clean, in order to preserve the purity of the rain water, which runs from them into large cisterns.

The public buildings of Vera Cruz consist of a palace, in which are the Government House, prison, &c., a Custom House, several churches, one or two convents, a theatre, hospitals, barracks, and some few others of minor importance. The public square, or plaza, is sufficiently spacious, but far from being elegant or attractive in any particular. It has on the north side the Palace, an ordinary looking building; on the east, the Cathedral, an old building of mixed architecture, principally Moorish; on the south and west, ranges of buildings having dwellings above and shops under the piazzas or "portales," below. The dwellings are generally commodious, having large, high, and airy apartments. Some of them are elegant, having towers or turrets on their roofs, admirably adapted for enjoying the sea breeze, a luxury inappreciable in latitude 19° 11′ north.

The increasing prevalence of that dreaded disease and scourge of this place, the *vomito*,* (a disease differing somewhat from the yellow fever of the United States and Havana,) and the oppressive heat and danger of exposing ourselves to the sun, compelled us to limit our excursions and examinations more than we desired. During the time we remained in the city, the average height of the barometer was 29.96 inches, and that of the thermometer, in the shade, 87°. The thermometer is often at this elevation in midsummer in New-York, but the heat of the sun is not near so oppressive as at Vera Cruz. In the cool of the evening, however, we sometimes ventured upon a ramble. The great place of resort for the Vera Cruzans, (the "Battery" of Vera Cruz,) is the Mole, which is now in a very dilapidated and decaying condition. It is said that its repair has been in contemplation for a long time. One thing is certain—if not soon repaired, it will be totally destroyed. But the climate of Mexico in these parts is admirably adapted to the production of procrastination among its inhabitants: "Manana," (to-morrow,) is the word with them. The Mole, as it is, is invaluable to the citizens of Vera Cruz, it being a place to which they resort for enjoying the sea breeze, social chit-chat, and the burning of tobacco, which both sexes are in the habit of doing in their mouths.

The public walk, "Alameda," lies in a southeasterly direction from the city, commencing at the eastern gate and extending about a third of a mile in an easterly direction. This, at some former period, must have been a beautiful, spacious, and shady promenade. Some few of the trees which were planted in rows on each side, are still standing. The way betwen these rows is well paved, and stone seats of a neat construction and appearance are placed along, at intervals, on the sides, for the accommodation of the promenaders.

The defence of Vera Cruz, in a military point of view, is very strong. The principal fortification is the castle of San Juan de Ullca. This is situated on an island to the northward of the town, distant about half a mile. It appears to be the well constructed work of skilful and competent engineers. It has a fine armament of cannon, mortars, &c., immense tanks for holding water, and can garrison 3000 men. It is a quadrangular fort, with four bastion fronts, one of which, the south-western, is bounded by the water of the harbor, having a depth of five fathoms close to the wall. On this front, large ring bolts are inserted and secured in the wall for the purpose of mooring shipping, to protect it from the violence of the *northers*, violent hurricanes peculiar to the gulf of Mexico. The other three fronts are bounded partly partly by the water of the harbor, and partly by a deep and wide ditch or moat covered by a glacis. This work is said to have cost about *thirty-five millions of dollars!* Report says that the King of Spain, when informed of its cost, went to his palace window, *in Spain*, to look at it, observing, that a fort which cost so much ought to be visible from all quarters of the globe. A similar work in the United States would cost about $600,000.

The population of Vera Cruz does not probably exceed five thousand souls at the present time. The former population is said to have been from 13 to 15,000, when it had a flourishing commerce. The causes which have contributed to this retrogression are various and evident: 1st, The unsettled and insecure state of its commerce during the first and succeeding revolutions and internal commotions, which have existed in a greater or less degree for the last fifteen years; 2d, The insalubrity of the climate is so great, that foreigners and others will not risk an exposure in it without comparative inducements, and no other inducement can generally exist than that of acquiring wealth, and since the accomplishment of this is almost entirely dependent upon a flourishing commerce, it follows that whatever is detrimental to this branch of human industry, is also detrimental to the prosperity of the city. Since the establishment of the present form of government, the duties are so onerous as to crush what ought to have been supported and fostered, and the immoral tendency of *smuggling* is thereby introduced. But it may be urged in reply, that the expenses of a newly formed government of a young nation, which has just thrown off the yoke of bondage, must be borne and obtained in such a way that the people may be least sensible of it. This may be true; but if the people are not sufficiently intelligent to know what most promotes their prosperity, they are hardly fit for a republican form of government. The ruinous effects of the retrogression of commerce upon this city cannot escape the casual glance of the stranger.

The harbor of Vera Cruz is objectionable on many accounts, but it might be greatly improved. Vessels are now obliged to discharge by means of lighters or launches, and they are much exposed to the hurricanes called northers, which come in with great violence from the north and west. The construction of a breakwater from the westernmost point of the reef, about half a mile to the northward of the castle, could easily be effected, and would render the harbor comparatively secure and safe.

The soil in the vicinity is mostly sand and unproductive, consequently vegetables bear a very high price. The market, however, is tolerably good.

This place will always be memorable in the history of this country, it being the spot upon which that celebrated conqueror and most extraordinary man, Cortez, landed with his army in 1519.

On the 24th June we left Vera Cruz on our journey for the city of Mexico. Our road for the day lay partly over a level sand beach, and partly through bushes and hillocks of sand. It was excessively warm, the thermometer being at 102° in the shade, the sun nearly vertical, no breeze, and the reflection from a loose sand striking into our faces, was very annoying. Add to this, we could proceed in a moderate walk only, and were obliged to stop at the end of every five or six rods to allow our horses to rest. For the last three miles of this day's journey, the vegetation on each side of us was luxuriant, and in all its tropical beauty. The trees were, many of them, of a good size, and all clothed in verdure. Large and excellent limes were hanging from branches frequent on both sides of us, and many of the trees were nearly invisible, being covered with a lichen or moss, resembling the missletoe, the fibres of which hung from the tops of the trees reaching the ground. The color of the lichen was whitish yellow. Shrubs and flowers of variegated hues also adorned our path. But the almost insupportable heat was a tremendous drawback to our pleasures. We arrived at Santa Fe a little before dusk, having passed over, for this day's journey, a distance of about nine miles.

Here a new scene presented itself to our view. A large company of "Arrieros" (muleteers) had already unpacked their mules, and were encamped for the night on each side of the road. On one side their cooking fires were arranged in a row under large shady trees. At each of these fires an Indian was busily engaged in preparing maize or Indian corn, for the purpose of making a kind of cake called "tortilla." These cakes are made by first crushing and then baking the corn, in the following manner: A flat stone (generally porphyry) about 15 inches wide, and 20 inches long, is placed in an inclined position by means of two legs at one end, the other end resting upon the ground. This stone is called "metate." A stone pin or roller, of a semi-cylindrical shape, about 18 inches long, serves in the hand to crush the corn upon the metate, the corn being frequently moistened with water. This roller is called the "mano," or pestle. When the corn is completely crushed, so as to form a kind of paste, it is made into flat cakes between the hands, and baked on grating over the fire. These are tortillas, very inferior to our hoecakes.

On the other side of the road, in the front line, were the pack-saddles of the mules standing next to each other, in a perfect order of arrangement, each saddle being as well known by the arrieros as the men in the ranks of a military company are known to the captain. The second line was formed of the tents, or rather roofs, under which the arrieros sleep. This shelter is merely a coarse piece of sacking. The next line was formed by the bales and packages of goods which they were to transport to Mexico. These were properly and carefully protected from the effects of rain by a covering of mats, which were secured by ropes on each side, fastened to wooden pins, driven into the ground, and extending the mats in such a manner as to form pent-roofs, similar to the fly of a tent. Behind these the mules, about 250 in number, feeding at several long troughs, formed the last line.

Some of the muleteers were attending to the mules; others had taken to their tents; and others were dancing, singing, gambling, drinking, and flirting with the girls. These arrieros have the universal character of being the most honest and industrious class of people of the Mexican Republic. An instance of dishonesty seldom occurs among them. Yet they are a wild looking jovial race, resembling nothing in our country. My next will be dated from Mexico.

J. P.

* The remedy most relied upon and universally used for this disease, is large doses of lime or lemon juice and sweet oil, repeated until an operation is produced.

Improvement in Railways.—It has been resolved to make trial, on the Birmingham railway, of slabs of slate fixed in a bed of concrete, as a substitute for the usual stone sleepers. We have since been informed that, in an experiment previously made on the premises of Messrs. Cottam and Hallem, in the presence of the engineer and several of the directors of the Company, it was found, by the hydraulic press, that a cubic inch of slate will sustain a pressure of three tons and a half, and that consequently slate of an inch and a half thick is more than equal to any pressure which it can be required to support on a railway. The saving in expense, if slate is ultimately adopted, will be at least one half.—[Engl. pap.]

MISCELLANIES, *Foreign and Domestic.*—The following notices are translated from Berzelius's last yearly report on the Progress of Science, by Dr. Lewis Feuchtwanger, of New-York.—[American Journal of Science and Arts.]

1. *A new ore of Antimony* has been discovered in the Hartz mountains by Zinkin, which resembles zinkenite, and appears to be also a subantimonio-sulphuret of sulphuret of lead with sulphuret of silver.

2. *A new Tenantite* has been examined by Hemming from a newly opened mine in Cornwall, which consists of

Arsenic	11·5
Copper	48·4
Iron	14·2
Sulphur	21·8
Silex and Gangue	5·

3. *Vanadiate of Lead.*—Johnson discovered some species of vanadiate of oxide of lead at Wanlockhead in Scotland; one species occurs on calamine in form of warts, and as large as a pin's head. It is of a dirty white, and appears to be dew of a pale red powder, has a resinous fracture, and specific gravity of about 7. The other is black, and looks like earthy manganese; a third has not yet been described, but Johnston has sent specimens to the Collection of the *Royal* Swedish Academy. It is regularly crystallized, and appears to be a bi-vanadiate of the oxide of lead.

4. *Plumbacalcite* has been described by Johnson as a mineral found at Wanlockhead in Scotland; it consists of carbonate of lime and carbonate of lead; it is crystallized in the primitive rhomboid of the calcareous spar; it occurs both transparent and opaque, and consists of 92·2 carbonate of lime, 7·8 carbonate of lead. By heat the carbonic acid is evolved, and the mineral assumes a reddish color. This mineral offers an interesting proof of the isomorphism of oxide of lead with a rhomboid of carbonate of lime.

5. *Pelokonite.*—Richter describes an uncrystallized mineral, occurring in Chili, with malachite and copper-green under the above name, (from πελος brown, and κονις powder.) It contains phosphoric acid and the oxides of iron, manganese, and copper; it has a blackish blue color, gives a liver brown streak of a conchoidal fracture and weak lustre; its specific gravity is between 2·5 and 2·57.

6. *Wolchouskoit.*—Kammerer described a new mineral from Siberia, which is amorphous, bluish green opake, and of conchoidal fracture; its touch is greasy, gives a bluish green streak, and adheres slightly to the tongue; consists of silica, alumina, oxide of chrome, and water.

7. *Worthite.*—This new mineral has been described by *Hess*, and found in a scapolitic boulder from the neighborhood of Petersburg. It is colorless, crystalline foliated, of specific gravity of about 3·0; harder than quartz, infusible before the blow-pipe, and dissolves with difficulty and with effervescence; in soda it becomes transparent, and yields water by heating in a tube; it becomes dark blue with nitrate of cobalt. Hess found it composed of

Silica	40·58
Alumina	53·80
Magnesia	1·00
Water	4·63

The formula is AAq + SS.

8. *Pyrargillite.*—Nordenskold discovered and analyzed two new minerals from Finland, the one he calls by the above name from its character of diffusing a clayey smell by heat. It is partly black, light, and lustrous, like the Lordawalite, and partly bluish granular or red, and without lustre; it seldom occurs pure in uncrystallized masses, the form of which approaches to a four-sided prism, with truncated angles; sometimes it is traversed with chlorite, so as to appear sparkling by polishing; its specific gravity is 2·505; its hardness 3·5; it is decomposed completely by muriatic acid; it occurs in granite, and it consists of

Silica	43·93
Alumina	28·93
Protoxide of Iron	5·30
Magnesia with some Protoxide of Manganese	2·90
Potassa	1.05
Soda	1·85
Water	15·47
Loss	0·58

Formula. $\left.\begin{matrix} F \\ M \\ Mg \\ N \\ K \end{matrix}\right\} S^3 + 4AS + Aq.$

9. *Amphodellite.*—This is the other mineral discovered by the above author from the lime quarries of Lozo, in Finland; its crystallized form bears much analogy to that of felspar; it is clear reddish, resembles in fracture scapolite, with two passages, which form an angle of 95° 9′; its hardness is 4·5, and its specific gravity 2·793; it consists of

Silica	45·80
Alumina	35·45
Lime	10.15
Magnesia	5·05
Protoxide of Iron	1·70
Moisture and Loss	1.85

Its Formula, $\left.\begin{matrix} C \\ F \\ Mg \end{matrix}\right\} S + 3AS.$

There are a few more minerals described which seem to require a thorough examination in order to establish their claims to be called new, as for instance *Skugisan* and *Monophan*, belonging to the family of the zeolites, and noticed by Breithaupt.

The Mengite from Siberia, and the Monticellite from Vesuvius, and noticed by Brooke and Berzelius from Galloro near Rome, a kind of anhydrous zeolite, which is difficult to fuse, and becomes gelatinous with muriatic acid; it is noticed by Necker De Saussure.

In regard to the Xanthite, described in a former number of this Journal, which occurs in Orange County, N. Y., and consists of

Silica	32·708
Lime	36·308
Alumina	12·280
Oxide of Iron	12·000
Protoxide of Manganese	3·680
Moisture	0·600
Loss	24·24

Berzelius observes, that if this analysis approaches to accuracy, and if a small part of the oxide of iron is contained in the mineral as a protoxide, the formula would be $2\left\{\begin{matrix} C \\ Mg \\ F \end{matrix}\right\} S + \frac{A^2}{F^2} S.$

10. *Ozokerite, a new combustible Mineral.*—This mineral occurs at Slauik, Moldavian District, near the Karparthes, and has been called by Glooker, Ozokerite (οζειν to smell, κηρος wax); it is of a talcose structure, the color between green and brown, of the specific gravity 0·955 to 0·970; it may be kneaded between the fingers, melts into a clear mass in the flame of a candle, is soluble neither in alcohol nor water, even when boiling, and but slowly so in ether and spirits of turpentine. This mineral may serve as an excellent material for lamps or tapers, burning like wax, with soft clear flame, and diffusing on its being extinguished an agreeable odor. Specimens are shortly expected from the locality.

11. *Platinum in France.*—A specimen of platinum has been exhibited before the academy at Paris, which has been extracted in combination with silver from galena, and which contains 0·00022 of Platinum; and since 1100 lbs. of the galena are daily produced from the mines, the daily produce of platinum will be 1 lb. 4 oz. 4 drams and 28 grains. The mines of Cohfolens and Aloue Depart. of Choraute are the localities for this platinum.

Essay on the Indian Summer, read at a meeting of the Maryland Academy of Sciences, by one of its Members, Baltimore, Dec. 16, 1833. [From Silliman's Journal.]

(Continued from page 661.)

From this detail of facts, it appears to us highly probable that electrical causes are negatively concerned in the production of the Indian summer; for instance, as during the warmer months they act vigorously by producing an intermixture of the different currents or strata of air; so, on the contrary, at the approach of winter, they act with diminished energy, and hence suffer portions of air, differing greatly in their temperature and humidity, to remain for a length of time without flowing into each other. We might mention evaporation as one of the causes concerned in the production of haze or clouds, but as it is dependent on, and influenced by, existing temperatures, we shall, in summing up our arguments, show how far the mean hygrometic condition of the air is effected by the annual change of temperature, as also by particular winds, and by the local conformation and geographical position of the adjacent country. Having now noticed the more prominent causes concerned in the production of the phenomena of the Indian summer, we proceed to explain, as far as possible, their mode and extent of operation.

The first important conclusion that we draw from the above details is, that the formation of haze or clouds, viewing the subject in its most general outline, must depend essentially on a reduction of atmospherical temperature, which brings the water contained in the air to a visible sub-vaporous state, constituting haze, or to an actual liquid condition, (minutely divided,) forming clouds. We believe further, that this visible alteration, or increased density, is confined chiefly or wholly to the lower stratum of air, and is immediately referable to partial and slow currents of moist winds from a southerly or south-easterly direction, (as meteorological records confirm,) and that these moist winds usually follow cool dry westerly or northerly ones, which having prevailed extensively both in the higher and lower regions of the atmosphere, have lowered its temperature and reduced its absolute quantity of moisture. Now, if we suppose this moist and warm current of air, (extend

ing perhaps in height some hundreds or even thousands of feet above the earth's surface,) to come into contact with a cool dry northerly one, the obvious result would be a reduction of temperature, attended with hazy or cloudy formation; while the superior stratum of air being altogether westerly or northerly, would remain dry and cloudless, which is, in fact, the precise condition of things during the Indian summer.

It might be asked whether those partial currents do not occur in the spring and summer season, and if so, why not give rise to the same phenomena? The reply would be, that the general tendency to foggy or cloudy weather is obviously less at those seasons than in the fall, from the existence of a cause which we mentioned in the early part of this paper, viz., that the mean temperature of the air being on the increase during the spring and summer seasons, (from the more direct action of the solar rays on the earth's surface,) its capacity to receive moisture and contain it invisibly is also augmented. Hence, an easterly wind will not produce rain, nor indeed sensibly affect the transparency of the air, until it has continued for such a length of time as to bring a great excess of moisture; when the solar heat becoming also obstructed, a further reduction of temperature and consequent precipitation occurs. And again, two other very important agents concur to prevent these phenomena from appearing in warm weather: we allude to the excessive heat at the earth's surface acting on the lower stratum of air, and the vigorous movement of electrical agencies on the higher regions, both of which causes concur to produce a constant and steady admixture of the atmospherical strata; the former, by rarifying the lower stratum and causing it to ascend; the latter by exploding and destroying large portions above, and reducing the temperatures of others, which as rapidly descend, and it is this activity of circulation among the currents of air during warm weather, that prevents the formation and continuance of a hazy or foggy atmosphere.

In confirmation, we may remark, that during the cold summer of 1816, when of course both these causes were acting with a diminished force, there was a very constant haziness of the air, so much so, that the sun could be viewed with the naked eye until 9 or 10 o'clock in the morning. A celebrated traveller in the south relates a fact which will convey some idea of the actual condition in which we suppose the lower stratum of air to exist during the prevalence of hazy weather; he remarks "that over the ocean the sky exhibits a paler blue than over the land; when from the summit of the Andes the eye is directed towards the great South Sea, a haziness uniformly spread to about 10,000 feet in height is observed to cover as with a thin veil the surface of the ocean—this appearance takes place in a season when the atmosphere viewed from the coast, or at sea, appears pure, and transparent; the existence of the opaque vapor is announced only to mariners by the little intensity of the azure color of the sky." Here it is evident that a slight additional density in this lower stratum would intercept a large portion of solar light, and give a turbid or hazy appearance to the general atmosphere.

By a very careful reference to Capt. Brantz' meteorological tables, we find, that in a very few instances, he notes hazy weather co-existing with a northerly wind—this fact, however, does not militate against the view we have offered, viz., that hazy weather is the result of a southerly or easterly current, supervening to a cool northerly one—for it is evident the same result would be produced if the differing portions of air only come in contact—with this qualification, that the superior dryness and force of a northerly wind would give a much shorter duration to the existence of haze, the continuance of which would be incompatible with a dry westerly or northerly wind.

We shall now proceed in a very general manner to inquire, why the Indian summer makes its appearance more particularly at the close of autumn. This part of our subject, by no means void of difficulty, appears capable of solution in the following manner. It is well known that a constant and general wind prevails within the tropics, moving round the earth from east to west, called the trade wind; observation also confirms that without the tropics, both north and south, the prevailing winds are westerly: the object of which appears to be a restoration of the equilibrium, which is disturbed by the trade winds—this westerly or north-westerly current, (for it would be oblique in our parallel,) being often counteracted during the summer by opposite winds, (brought into existence by local causes—and the direct action of the solar heat on our continent during the summer, and early part of the fall,) comes to act again with renewed force, during the first cold weather of autumn, and continues at intervals until it has, as it were, more than fulfilled its intention, and is hence usually succeeded again in November and the early part of December, by what may be termed a southern re-action—at which period the phenomenon of the Indian summer occurs, being at the precise time when the general predisposition of the air to form haze or fogs is at its maximum.

It appears to us also, that the existence and duration of the Indian summer in this country has an important connection with the extensive forests and uncultivated lands, peculiar to America, and it is worthy of remark, that according to the recollection of our older inhabitants, its former duration was often three or four weeks, whereas its present continuance is short and uncertain, seldom exceeding ten or fifteen days. It appears further, that this decline has been somewhat regular, keeping pace with, and evidently influenced by, the gradual uncovering of the country. Humboldt states, that plains abounding with trees are usually characterized by a foggy atmosphere. This is particularly the case with Brazil and Guiana, and the great central basin of South America, which receives the waters of the Amazon. In the middle of a continent overspread with forests, and watered by equatorial rains, the humidity is nearly the same as on the ocean.

The temperature of the atmosphere diminishes at an average of one degree for every three hundred feet, hence the humidity is greatest in the lower regions. The hygrometric condition of the air also varies, (of course,) with different elevations of country, the more elevated possessing the drier atmosphere. Again, in tropical latitudes the clouds form at a greater height above the earth's surface, because the point of condensation or congelation is confined to those cold elevated regions, whereas in the temperate zones, (and especially in the fall season, when the mean temperature of the air is but a few degrees above the point of deposition,) fogs and clouds form near the earth's surface—all these facts, if closely examined, corroborate the views we have been trying to establish—but which we confess are too imperfectly and theoretically founded.

One of the most remarkable phenomena of the Indian summer is the peculiar redness of the sky, which in our opinion is explained on the principle that the white beam of light being unfolded in its passage through the foggy stratum near the earth's surface, its more delicate rays are either reflected back, or absorbed, while the stronger rays of red and orange all penetrate to the earth's surface, and by their excess tinge surrounding objects with their own color, and especially the lower atmosphere, which reflects and refracts them in every possible direction: much on the principle that, to the eye of a person who has descended to a great depth in a diving bell, every thing appears reddish, because nothing but red rays can penetrate the dense medium which is interposed between him and the sun. Again this redness of the air, together with the mechanical irritation produced by the denseness of the aerial vapor, excites a painful affection of the eyes—this sensation, connected with the smoky appearance of the sky, induces great numbers of the inhabitants of this country to believe that the Indian summer consists of a smoky state of the air, produced by burning the vegetable decidua which are collected together in the fall season for this purpose, or, as some will have it, the firing of the neighboring mountains. This appearance of actual smoke is however an optical illusion, produced by the foggy appearance of the air, and which seems to find confirmation by the great irritation of the visual organs, effected by the excess of red rays, &c.

The increased temperature which accompanies the existence of this hazy weather is referable to several causes, viz.

1st. The prevailing wind, which, being from a southerly direction, is usually warm.

2d. The heat radiated from the earth's surface is immediately returned, (on a well known principle,) being reflected back by the haze of the atmosphere, while lastly the temperature is further increased by the condensation of both air and moisture during the formation of the foggy stratum.

We have now hastily explained, or rather touched upon the leading phenomena of the Indian summer, but acknowledge to have written on this subject rather with a view to elicit further inquiry from others than to establish any theory of our own; every phenomenon connected with the earth's atmosphere is highly deserving of our most earnest investigation, for daily observation confirms, that not only the health, but also the moral qualities of our species, are greatly under the control of its influences. We hope therefore to see this subject taken up by some one whose time and opportunity are less restricted than our own, and whose superior knowledge of the laws which direct and govern our atmosphere shall enable him to place it on more sure and elevated ground.

COMMERCE OF THE WEST.—We have this morning a letter from Buffalo, dated Oct. 23d, from which we make the following extract—"Seventy-two vessels were in our harbor this morning, bound to the west—each vessel averages about 400 barrels bulk, making at least in the whole 25,000 barrels. Our warehouses are still full of goods, and the wharves are crowded. Boats from the east are constantly arriving."—[Commercial Adv.]

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 616.)

Of Sensibility.—Under this head are comprehended, not any sentiment or feeling of the mind, but the sensations of the body.

We form our notions of sensibility from that of the skin; and it is no doubt necessary that we should do so. It is in constant communication with things around us, and affected by their qualities; it affords us information, which corrects the notions received from the other organs of sense, and it excites our attention to preserve our bodies from injury. We are so familiar with the painful effects of injuries upon the surface, that there is nobody who does not imagine that the deeper the injury the more dreadful the pain. But, on the contrary, it is a well established fact, that to such irritants as would give the skin pain, the internal parts are totally insensible. And it is equally certain, that though the nerves, the instruments of sensation, are incapable of producing any perception without the brain, yet the brain itself, the part which is the seat of intellect, and to which every impression must be referred before we become conscious of it, is itself as insensible as leather. These considerations show us, that sensibility to pain is not a necessary result of life, and they naturally lead to the inquiry for what purpose is sensibility bestowed, and how is it distributed in the body?

We have first to show that the skin has sensibilities exactly suited to the functions it has to perform. Science no doubt informs us, that warmth and cold are only relative degrees of heat; to the skin they are distinct sensations, and excite in different ways both the mind and the bodily functions. Cold braces and animates to exertion, whilst the warmth, which is pleasant to us, is genial to all the operations of the animal economy. Their alternations are the most constant sources of our enjoyment, and at the same time conduce to exertion and to health. All this, however, belongs to the skin exclusively; parts internal, although peculiarly sensible to their proper stimulus, give no indication of sensibility to heat; if there be internal sensibilities of heat, they are morbid and deceptious. Molten lead would produce pain and death, being poured into the interior of the body, but the sensation of burning is a property of the surface only. It is the excess of that particular sensation, which is calculated, like the other endowments of the skin, to suit the medium in which we live, and to force us to the regulation of the temperature necessary to preserve life.

Touch, or the sensibility to bodies pressed upon the skin, is likewise a distinct and appropriate sense. The sensibility of the skin to pricking, cutting, or tearing, is also in curious contrast with the sensibility of the solid internal textures, as bone, cartilage, and ligament. We have arrived at the full comprehension of this subject very slowly. Disagreeable experiments have been made, but the following is as interesting as it was innocently performed. A man who had his finger torn off, so as to hang by the tendon only, came to a pupil of Dr. Hunter. "I shall now see," said the surgeon, "whether this man has any sensibility in his tendon." He laid a cord along the finger, and, blindfolding the patient, cut across the tendon. "Tell me," he asked, "what I have cut across?" "Why, you have cut across the cord, to be sure," was the answer. By such experiments it became very manifest, that bone, gristle, and ligament, were insensible to pricking, cutting, and burning. Were they therefore insensible? The reader will answer—Surely, it is a matter proved. But before we finally decide, let us take this into consideration,—that the sensibilities of the body differ in kind as well as in degree; and every part has its peculiar kind, as well as its degree; and every part has its kind of sensibility with reference to its function, and also with reference to its protection from violence. If the membranes between the bones of our great joints, or the cords which knit the bones, were sensible in the same manner and degree with the skin, we should be incapable of motion, and screwed to our seats, as the man appears to be who has a violent attack of acute rheumatism.

But although these bones and cartilages, or gristles, and ligaments, be not sensible as the skin, or the surface of the eye, they possess that which is suited to their condition, which permits their free use, and yet limits that too free exercise which would be injurious to their textures, or raise inflammation in them. The ligaments and tendons, then, which are insensible to pricking, cutting, and burning, are sensible, nevertheless, to stretching and tearing! It is remarkable that such men as Drs. Hunter and Haller, the luminaries of their science, should have held the opinion that the bone and the membrane which covers it (the *periosteum*), the gristles or cartilages, the ligaments of joints, and the tendons of muscles, were insensible parts, and yet be in daily attendance on those who suffer the pain of a sprained ankle, where there are no parts to suffer but those enumerated, and where the pain, excessive in degree, was felt in the instant of the sprain. These considerations explain to us that pain is the safeguard of the body. This capacity of conveying painful impressions to the mind is not given superfluously to all parts; on the contrary, the safe exercise and the enjoyment of every part is permitted without alloy, and only the excess restrained.

This subject is finely illustrated by the apparent insensibility of the heart. The observation of the admirable Harvey, the discoverer of the circulation of the blood, is to this effect. A noble youth, of the family of Montgomery, from a fall and consequent abscess on the side of the chest, had the interior marvellously exposed, so that after his cure, on his return from his travels, the heart and lungs were still visible, and could be handled; which, when it was communicated to Charles I., he expressed a desire that Harvey should be permitted to see the youth and examine his heart. "When," says Harvey, "I had paid my respects to this young nobleman, and conveyed to him the king's request, he made no concealment, but exposed the left side of his breast, when I saw a cavity into which I could introduce my fingers and thumb; astonished with the novelty, again and again I explored the wound, and first marvelling at the extraordinary nature of the cure, I set about the examination of the heart. Taking it in one hand, and placing the finger of the other on the pulse at the wrist, I satisfied myself that it was indeed the heart which I grasped. I then brought him to the king that he might behold and touch so extraordinary a thing, and that he might perceive, as I did, that unless when we touched the outer skin, or when he saw our fingers in the cavity, this young nobleman knew not that we touched the heart!" Other observations confirm this great authority, and the heart is declared insensible. And yet the opinions of mankind must not be lightly condemned. Not only does every emotion of the mind affect the heart, but every change in the condition of the body is attended with a corresponding change in the heart: motion during health—the influence of disease—every passing thought, will influence it. Here is the distinction manifested. The sensibility of the skin is for a purpose, and so is the sensibility of the heart. Whilst the skin informs us of the qualities of the external world, and guards us against injury from without, the heart, insensible to touch, is yet alive to every variation in the constitutional powers, and subject to change from every internal influence.

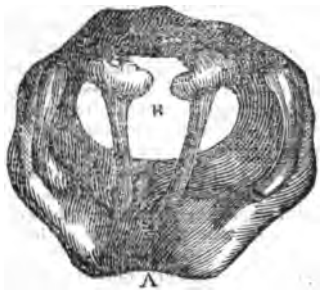
There is in the several organs of the body, as it were, a distinct life; that is, they possess sensibility, the grand endowment of life, necessary to their condition, and adapted to their appropriate stimulus. The impressions made upon them will sometimes rouse them into activity, or call muscles into action which are necessary to their functions or for their protection; and this oftentimes without reference to the mind at all, and consequently without our consciousness.

Perhaps we have the most agreeable example of this in the eye. That organ has been selected in the Preliminary Discourse of the Objects and Pleasures of Science, as showing how mechanical advantage is taken in the arrangement of the muscles to produce velocity of movement in guarding the eye. But this fine mechanism would be lost if the excitement depended on our will,—if there were not a sensibility appropriated to the action, and an influence quicker than thought. It is not by feeling the pain of the offensive body, or by estimating its dangers, and acting on the conviction, that we close the eye to avoid injuries. This would be an operation all too slow for the intended purpose; and, therefore, the muscles, possessing these extraordinary provisions, are put in relation with a sensibility more admirable still. So when a light foreign body touches the eye-lashes, they give alarm, and cause a motion, both of the eye-lids and eye-ball, quicker than thought. The eye-lashes, seated on the tender extremities of sensitive nerves, preserve the eye in two ways—by guarding its interior from the lateral light, and by exciting the motion of the eye-lids, even before the offensive body can touch the eye's surface.

We may take another illustration to show how sensibility, one of the endowments of the living part, is adapted to the mechanical organization, and with an appropriation more admirable than the mechanism. When we speak of the sensibility of the skin, it is still possible to misconceive its nature, and to suppose it accident merely; but in the instance to be adduced, the sensibility is different, and it is put in connection with a hundred muscles; without this high and peculiar sensibility, and its multiplied relations to muscles, independent of volition, the mechanism we are about to describe would be quite useless.

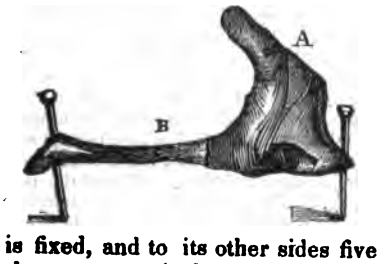
The top of the wind-pipe is called the *larynx*, and consists of five elastic cartilages. These do not merely keep the sides of the wind-pipe apart, and the passage for the breath free, but they perform offices important to the economy both of body and mind; they are an essential part of the instrument of voice; they at the same time guard the lungs from injury.

Fig. 24.



The *thyroid* cartilage is the largest of the cartilages of the larynx, it is that we feel projecting on the fore part of the throat, called the *pomum adami*, (A.) It is a protection to the fine apparatus behind it, and indeed this is the reason of its name, (*scutiform*, like a shield.) Within the thyroid stand the *arytænoid* cartilages, (B.) This cartilage is of an irregular triangular form. It is socketed or articulated on the cartilage below, and is perfectly moveable. To the corner which projects forwards the ligament

Fig. 25.



(B) is fixed, and to its other sides five little muscles are attached; these muscles, by moving the cartilage, draw and vary the position of the ligament. It is these cartilages and this ligament, which, vibrating in the stream of air, give the tremor, and vocalize the breath; the tones so produced are articulated in speech.

This is a subject far from being exhausted in our philosophical works, and may call for observation afterwards;* but at present we may look on these ligaments, not as the *cordæ vocales*, but in another of their offices —forming the slit which opens and shuts in breathing, for the protection of the lungs. But here it is pertinent to remark, that in the structure of an animal body one organ is made subservient to several functions, without interference in the performance of any of them. This is especially true of the larynx. It is one of those uses only, and the least important, that we have at present to observe.

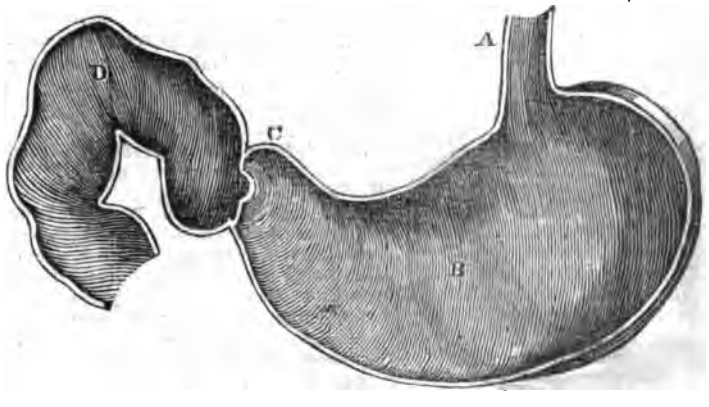
The ligaments being invested with the lining coat, or membrane of the wind-pipe, draw it into the form of a slit like the till of a shop counter, and this is the chink of the glottis (*rima glottidis.*) This slit opens and closes with every inspiration, moving as we see the nostrils do in breathing. But the most admirable thing of all is the acute sensibility given to this part, and to no other, so that the lightest husk, or seed, or smallest fly, drawn in with the breath, and touching the margin of the chink, is caught there by the rapid action of the muscles and consequent closing of the aperture. Now, were the provision for the protection of the lungs to be only thus far perfect, there would be an effectual means of preventing the intrusion of foreign matter into the delicate cells of the lungs, but not for its expulsion from the entrance which it had reached. Accordingly, although the sensibility of the glottis is put in operation with the shutting of the chink, it also animates another class of muscles, viz. all those which, seated on the chest, compress it, and force out the air in coughing; and these combining in one powerful and simultaneous effort, whilst the glottis is closed, overcome that constriction, and propel the breath through the contracted pipe with an explosive force, which brushes off the offending body. There is one thing more necessary to this most important though familiar action—the lungs are never empty of air: in breathing we do not fully expel the air; if we did, there would be a period of danger occurring 17 times in a minute, for in the first part of each inspiration, something might be drawn into the wind-pipe which would suffocate. But by this provision of air retained in the lungs more than necessary to respiration, and which it is possible to expel by a more forcible expiration, there is always a possibility of coughing and expelling the offensive thing at any point of time in the act of inspiration.

The sensibility seated in a spot of the throat so beneficently, does not extend into the wind-pipe; for we cannot more admire the perfect adaptation of this living property, than the circumstance of its never being bestowed in a superfluous degree, nor extended where it is not absolutely required. Just as the sensibility of the skin protects the parts beneath, so in the same manner does the sensibility of the top of the wind-pipe protect all the interior of the tube, and the lungs themselves, without the necessity of this property of irritability extending through the whole continuous surface.

The simple act of sneezing affords a very curious instance of the mutual adaptation of muscular activity and the governing sensibility. The sensation which gives rise to this convulsive act is seated in the membrane of the interior of the nostrils, and we are not surprised with the difference of sensation from that in the throat which excites coughing. But is it not a very curious thing to find some twenty muscles thrown out of the action excited by irritation of the nose; and as many excited which were not in the class of those influenced in coughing; and for the very obvious purpose of shutting the passage by the mouth, or at least forcibly driving the air through the nostrils? No act of the will could so successfully propel the air through the nose in such a way as to remove the offensive and irritating particles from the membrane of the nose, and clear those passages.

These last examples of an appropriate sensibility might introduce us to an acquaintance with those internal sensibilities which govern the actions of parts quite removed from the influence of the will; but the description of them may be deemed unnecessary. We shall just hint at the guard which nature has placed on the lower ori-

Fig. 26.



fice of the stomach, to check the passage which the appetites of hunger and thirst may have given at the upper orifice (A) to aliments not easy of digestion. This lower orifice (C) is encircled with a muscular ring; the ring is in the keeping of a watchful guard. If we are employing the language of metaphor, it is of ancient use. The Greeks called this orifice *pylorus*, which signifies a porter,* and his office is this: When the stomach has received the food, it lies towards the left extremity, or is slightly agitated there. When the digestive process is accomplished, the stomach urges the food towards the lower orifice. If the matter be bland and natural, it passes, and no sensation is experienced. But if crude and undigested matter be presented, opposition is offered to its passage, and a contention is begun which happily terminates in the food being thrown again to the left extremity of the stomach, to be submitted to a more perfect operation of the digestive powers seated there. It is during this unnatural retrograde movement of the food that men are made sensible of having a stomach. Yet the sensations, how unpleasant soever, are not to be regarded as a punishment, but rather as a call on reason to aid the instinctive powers, and to guard against disease by preventing impure matter from being admitted into the portion of the intestinal canal which absorbs, and would thus carry, those impurities into the blood to engender disease.

Such are a few examples of the variety in the sensibilities of the animal frame; guarding us against external influences when they would threaten destruction to the framework, and adjusting the operations of inter-

* For a full description of the Vocal Organs, together with engravings illustrative of the same, the reader is referred to page 117, vol. iii. of this Magazine.

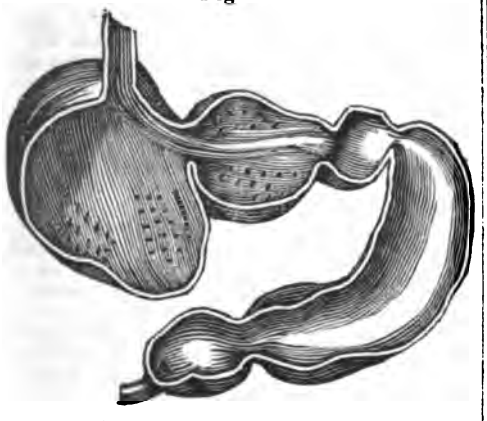
* The upper orifice was called by them *œsophagus*. as it were the *purveyor*, from two words signifying to bring food

nal parts too complicated and too remotely situated for the superintendence of reason.

Medical authors, without being empirics, do, notwithstanding, take great advantage of our ignorance. We can all of us take warning from the sensations experienced in the process of digestion, and there can be no harm in giving every man a confidence in the sensibility of his stomach, and in its indications of healthy or disturbed functions. We have the best proof of what we wish to inculcate in the action of the ruminating stomach. A cow swallows the gross herbage, and fills its large first stomach. When it chews the cud, the stomach, by its action, rolls up the grass into distinct pellets, or balls, with as much regard to the office of its being rejected into the mouth, as we do in masticating for swallowing. When the ball is brought into the mouth and chewed, it is again swallowed; but in descending into the lower part of the gullet, a muscle draws close the aperture by which it passed into the large stomach in the first instance, and it is now ushered into a second stomach, and so successively onwards to that stomach in which the digestion is performed. The curious muscular apparatus by which this is accomplished needs not to be described; but surely, the sensibility which directs it, which, kept apart altogether from the will, is yet in its results so like the operations of reason, presents a subject of just admiration.

The elastic structure of the camel's foot, the provision around its eyes for ridding them of offensive particles, the power of closing its nostrils against the clouds of sand, and its endurance of fatigue, would not enable it to pass the desert, unless there were provisions for the lodgement of water in its stomach, and unless this apparatus were animated by peculiar sensibilities; for there

Fig. 27.



are muscles to retain the fluid in the cells of its stomach, only permitting it to ooze out according to the necessities of the animal; and there is a muscle, represented in the figure above, which pulls up the one or the other of the orifices of the different stomachs, to receive the food from the lower end of the gullet, according to its condition, whether to be deposited merely as in a store, or to be submitted to the operation of digestion.

The surprising thing in all this is not so much the mechanical provision as the governing sensibility. What, for example, should in the first place impel the grosser food, when collected, into the first stomach? What should, in the next place, and after rumination and mastication in the mouth, carry it into the third stomach; since water is carried into neither of these, but into the cells of the second stomach?

Yet, after all, this only brings us back to a sense of the operations of our own bodies. The act of swallowing, the propulsion of the food into the gullet, and the temporary closing of the wind-pipe at such a time, is just as surprising. This latter operation is never deranged but by the interference of the will. If the individual attempts to speak, that is, to govern these parts by the will, when they should be left to these instinctive operations, or if terror, or some such mental excitement, prevail at the moment of swallowing, then the morsel may stick in the throat.

All this shows how perfect the operations of nature are, and how well it is provided that the vital motions should be withdrawn from the control of reason, and even of volition, and subjected to a more uniform and certain law.

But the point to which we would carry the reader is this, that though there are the proper sensibilities of the body, with reference to perception or consciousness, yet there are others no less curious, which control the internal operations of the economy; and that the mechanical provisions are but a type of what is promised to him who will look into the sensibilities of the body for the proof of power and contrivance.

Now, the human stomach, though not so complicated in its apparatus of macerating and digesting vats, is possessed of a no less wonderful degree of governing sensibility, which may be trusted as surely as the most skilful physiologist.

Rotten Stone.—This useful article, of so much importance to the workers in metals, and in house-keeping, where knives, forks, and brasses are, to be kept in proper condition, is found in West Springfield in this State, and also in South Hadley. The importation of rotten stone might be wholly dispensed with, were any pains taken to introduce the native polishing dust into the market.—[American Magazine.]

[*From Niles' Weekly Register.*]

THE DRY ROT.

H. Niles, Esq., Baltimore.

Dear Sir:—I send you, herewith, copy of a communication that I caused to be placed in the Navy Department at Washington last winter, which I wish you to publish in your useful Register for the benefit of those who may see proper to make use of it, and oblige, dear Sir, your obedient servant,

Wm. Patterson.

Baltimore, 18th October, 1834.

Dry Rot.—The Dry Rot in Ships of War and Merchant Vessels has long been a subject of serious and anxious concern. Many plans for their preservation from this evil have been suggested and tried without success. Having, for a long series of years, had considerable experience as a constructor, owner, and employer of Merchant Vessels; and, believing that I have succeeded, at least I have succeeded to my own satisfaction, in preserving ships of this description as long as they are likely to be useful or profitable—and I therefore feel prompted to unfold my plans and my experience to the Navy Department.

In order that those plans and that experience may be better understood, I shall commence with my situation and observations in early life.

In the year 1766, at a very early age, I was placed in the counting house of a shipping merchant in Philadelphia, which city was, at that time, celebrated, perhaps, beyond any other place in America, for fine vessels. My employers were largely engaged in the shipping business—they built a ship or vessel every year or two: here I had a favorable opportunity of seeing and becoming familiar with the building, equipage and employing of merchant sea vessels. Owing to these circumstances, I acquired so great an attachment and fondness for vessels that they have adhered to me through a long life. Then, as now, the speedy decay of ships was a matter of serious consideration, and every scheme for their preservation that was suggested, was tried, but without answering any useful purpose. Some merchants, in building vessels, allowing their frames, when raised, to remain for a length of time on the stocks, exposed to the weather; others smeared the timbers with fish oil; and others again used oil and paint; all of these experiments were attended with little or no success. In one instance, I knew the frame of a vessel to be plyed with fish oil throughout an entire summer; and, in the fall of the year, when she was about to be finished, it was discovered that the oil had penetrated the timbers more than a quarter or half of an inch: this proved to be little or no protection, and the experiment was abandoned. In another instance, I knew of a very fine vessel built (for a Charleston packet) with so much care that she required no caulking nor repairs for four years; at the end of that time, when she was carried into dock to be caulked, she was found to be so totally destroyed by the dry rot as to be unworthy of repair, and was broken up. Her rapid decay was attributed to the unusual care which had been taken of her whilst running.

Some few, even at that early period, made use of salt; but a great prejudice existed against this mode, owing to the belief that it corroded the iron fastenings (copper was not then used in fastening our vessels), and the apprehension that the dampness in a salted vessel might be injurious to the cargo.

I became a ship owner in the year 1773, and one of my first considerations was, how should I preserve that description of property from speedy decay? Observing that timber, when sunk deep in swamps or in the water, lasted for ages, I concluded that exclusion from the air and saturating the pores of the wood with moisture, must be the true secret for its preservation. Reflecting on this circumstance, and perceiving that the wooden floors of ware houses used for the storage of Bay salt, were always damp in moist weather, I was led to the conclusion that Bay salt, properly applied, must have the effect of preserving timber. Under this impression, I adopted the following plan with all the vessels I have built from that time till the present, (a period of more than sixty years, as I am still a ship owner;) while building, when the bends and bottom planks are on, and before delling, I have caused three sets of stoppers to be placed fore and aft between all the timbers, to keep the salt in its place. The first tier of stoppers are placed at the floor heads, the second immediately below the lower deck beams, and the third between decks just above the air streak, common in all double decked vessels. Air streaks are left above the first and second tiers of stoppers, for the purpose of adding more salt as the previous supplies of that article settle or are dissolved. Just before finishing the ceiling of the vessel, the salt is filled in among all of the timbers, from the lowest tier of stoppers to the upper deck—taking care that the salt in the upper tier is well rammed down, (if wetted so much the better,) for, after the plank-shears are laid and secured in their places, the salt cannot be re-placed without incurring too much trouble and expense.

Having experienced great difficulty in preserving large timbers, (especially transoms) above light water mark, I have, of late years, had such pieces bored through the centre with an auger of two inches or two inches and an half in diameter:—these holes are filled with wetted salt, and then plugged at both ends before placing the timbers in the vessel.

In the forward and after parts of the vessel, where the timbers are so close together that salt cannot be introduced among them, I have found it necessary to incase the timber and confine the salt in this way. In one instance I had all of the knees and the steps of the masts, in a fine ship, boxed in and filled with salt: this answered a very good purpose, but it is too troublesome in merchant vessels.

I have not only sailed my vessels in the manner pointed out above, in the first instance, but I have had them examined carefully every two or three years, and where the salt has wasted or settled, a fresh supply has been added.

In all my experience, I have never found a defective timber in vessels thus prepared, and thus taken care of, and I am persuaded that the dry rot may be entirely prevented by adopting the above precautions. As a proof of the good effects of the above mode, I will add, that I have two vesses now running, which are perfectly sound and trust-worthy; one of them is 31 years old, and the other 25, and the only repairs that have been given to their hulls,

were the renewal of the waist planks of both, and the quarter deck of one of them. This was not owing to the decay of the plank, but to the circumstance of its being fastened with iron; the corrosion of the iron caused openings where it passed through the wood: had copper fastenings been used, the decays would not have happened. I think all vessels of war ought to be secured with copper fastenings, and no iron ought to be used when it can possibly be avoided.

I have seldom used the live oak in the construction of vessels, as it is hard to work, and too heavy for merchant ships: I greatly prefer the timber of our bay—white oak, locust, cedar, and yellow pine. I use the white oak for the frames and for plank from the keel up to and including the bends. From the bends to the upper deck, I form the frame of locust and red cedar, an equal number of pieces of either kind, alternately distributed. The sides, quick-work, decks, upper beams, and cat lins, are formed of the heart of yellow pine. Latterly, I have fastened the sides and decks with copper.

My vessels have generally been employed on long voyages, to the East Indies and South America; and, to guard against delay and accidents on such voyages, I have fitted them out in the following manner: They are copper fastened—then sheathed with yellow pine boards one inch in thickness, put on with copper nail s of two inches or two inches and a half in length; a layer of strong paper, dipped in tar, is placed between the pine boards and the bottom of the vessel; and another layer of paper, prepared in like manner, is ploced between the pine boards and the copper. The copper sheathing that I use weighs from 28 to 32 ounces the square foot. In this way the vessel may be said to have five bottoms—two of wood, two of paper, and one of copper.—They are so tight that it is necessary to have cocks, through which water may be introduced into the hold to keep the vessel sweet. An additional advantage is, that they may be run with safety two or three years longer than they could do, if they were coppered on a single bottom of wood.

One of my vessels ran seventeen years and wore out three sets of sheathing copper before I removed the pine boards; fearing that the main bottom might require some attention in consequence of the decay of the oakum, I stripped off the sheathing boards, and discovered, to my surprise, that the bottom and seams were in perfectly good order—indeed it appears as if the water had never penetrated to the main bottom, and that the sheathing of wood might have remained on with safety for many years longer.

The year before the breaking out of the late war with Great Britain, I commenced building a fine vessel, and had her frame raised, her bends on, and bottom planked, when I determined to proceed no further. I erected a shed over the vessel, under which she remained four years before I concluded to finish her. All possible care was taken of her, yet some of the large pieces of timber were found defective, especially the transoms—timbers 18 inches square were found to be entirely destroyed by dry rot, although the interior exhibited no symptoms of unsoundness. It was owing to this circumstance that I resorted to the above recited plan of boring the large timbers and filling the holes with salt.

For the preservation of vessels of war, the method which I have pointed out, and which I have pursued, would be of great consequence: it would save millions annually to those governments, which, from choice, or from necessity, keep fleets in commission.

The only difficulty in the way of its introduction arises from the prejudice against the use of salt, under the impression that it causes too great a degree of moisture in the places allotted for the accommodation of the officers and crews. I have experienced no inconvenience in this respect, when the cabins are lined with dry boards, attached to the inner ceiling. Nor have I in any instance found that any danger has happened to the cargoes, in consequence of the moisture.

To overcome any inconvenience that might be apprehended, it is only necessary to prepare the accommodations for the officers and men in ships of war, by fastening strips of plank an inch thick up and down, to the sides of which strips a sheathing of dry boards can be attached. This will effectually prevent the escape of the moisture. The northern and eastern fronts of our country houses are sometimes secured in this manner—from north east storms.

I have mentioned bay salt as the only kind that ought to be used for the preservation of vessels, owing to its quality of giving in moist weather—dry stoved salt does not posess this quality, and is therefore unsuitable.

I have had some experience with fast sailing vessels, vulgarly called *Baltimore clippers*, and I have witnessed their rise and progress in two wars.—Some of them have performed wonders—it is only necessary to say that they require great care and judgement in their construction and equipment, and that they should be commanded by men trained in their management. WILLIAM PATTERSON.

Baltimore, 26th February, 1834.

THE VOICE OF THE MECHANICS.—The following speech, delivered some weeks ago by Mr. Van Winkle, at the Mechanics' Meeting in Brooklyn, will sshow what are the sentiments of real mechanics on the subject of the oppressions they are now subjected to by the system of State Prison Monopoly.

Mr. Chairman:—I rise, by request, to offer a few remarks on the interesting, absorbing subject, that has called us together this evening. I know not whether the remarks I am about to make will be considered obtrusive; I can only say that I hope not. Most of those present have, no doubt, had an opportunity of reading the Address and Resolutions of the Delegates to the Utica Convention in August last. I doubt not it is satisfactory to all classes of citizens, as well others as mechanics. How could it be otherwise? since it details harmony and good feeling, the sure presage of ultimate success in a righteous cause.

Mr. Chairman, the genius of our government repels oppression and injustice; and, let me ask, sir, what can be conceived more unjust and oppressive than to establish a system which, in the language of Mr. Jefferson, "corrupts large portionsof citizens, and makes them pay the price?" Is this not literally true as respects the State Prison Monopoly in its bearings on mechanics? Its destructive effects are felt in every workshop in the country;—nay, directly or indirectly, by every class of community. The merchant, the farmer, the professional man—all—all feel its injurious effects, for all have a deep interest at stake in the moral purity of the mechanics; for in their intercourse with society, all classes come, in business or otherwise, in daily contact with mechanics. All are, therefore, interested to prevent the mechanics from becoming depressed in character and feelings, or demoralized in their habits. They have the numerical force, and hence the power, to make themselves respected among their fellow men; and where that power is constitutionally, calmly—yet determinedly exercised, it augurs well for the amelioration of society in general, and will be hailed as a new era in the moral and political world.

Who, more than mechanics, contribute to the comforts of society, or to the advancement of the arts and sciences? Who, more than they, stood forth in the front ranks at the times that have been emphatically called "the times that tried men's souls?"—Who did more, whether in the tented field, or hard-fought battles—in long-suffering and determined purposes, to gain our liberty and independence from British thraldom, or in the senate and legislative halls, to secure to our country the proud appellation of "a free and independent nation?" To enumerate all, would be an arduous—to discriminate, might be considered an invidious task. I will simply ask, where was our Franklin, our Sherman, our Rittenhouse, our Green, besides thousands of others, not perhaps, as conspicuous in the page of history, but, nevertheless, as useful and efficient as any class can boast. And can it be, for a moment, supposed that a class of men who claim such members, can submit, without a struggle, to be injured, degraded, and rendered despicable by a system so unjust and so odious to themselves and their children, as this present State Prison system? Forbid it, Justice! forbid it, common sense!

We have, Mr. Chairman, in the pursuit of our rights, to contend with a foe subtle and persevering, for the speculator on the necessities of honest men is reckless and insatiate in the pursuit of his ends. No arts will be left untried—no subterfuge or prevarication, however preposterous in appearance to the honest and ingenuous mind, will be left unassayed to throw doubt and suspicion on the motives that have actuated us in taking the stand we have. At one time we will be represented as wishing to establish a new political party; at another, to raise up a party exclusively of mechanics; and again, at another, of colluding with one or the other of the two great political parties that at present agitate this country.

Fellow mechanics! let their misrepresentations pass for all they are worth; but let us strictly adhere to the principle upon which we commenced and have persevered in, which is, to consider the object of obtaining relief from a corrupting and destructive grievance to us, as paramount to all party considerations. Let us convince all, that, as citizens, we know our rights, and will resolutely persevere in seeking, until we obtain and secure them for ourselves and those who are to succeed us in our avocations. Let us be resolved not to leave to our children the miserable heritage of competing for that heritage with felons.

There are still, I am sorry to say, those who think that the representations of Mechanics, as respects the injuries they receive from this system, are exaggerated. The want of investigation is the only reason I can assign for this. Is it possible that any man of reflection, the least acquainted with business, can doubt on this subject? Surely, no *merchant* can. If there is a merchant who hears me, (and I have no doubt there are many,) I would propound this simple query to him. If there were $100,000 worth of an article on sale in this market, (say 100,000 pounds of tea, at a dollar per pound,) and 10,000 pounds were smuggled into the market, and sold for 30 cents per pound, what effect would this have on the price of the quantity previously in the market? Would there not be a serious depreciation? Would it not be ruinous to many? If a circumstance like this would be injurious to the merchant, how much more is it to the mechanic, who suffers from legalized smuggling from Sing-Sing and Auburn Prisons? The merchant can execute an order for the article he has on hand in a day, and hence his loss may comparatively be on a declension of price, but trifling; but the mechanic requires time to execute orders. While he has his hands employed to accomplish his contract, the market becomes glutted with the article he has contracted to furnish at a price below his first cost; and this caused by convict labor. He completes his order. He looks around for another contract to keep his business progressing, and his workmen in employ; but alas! he finds that the man who has perhaps robbed him, or his neighbor, has superseded him by authority, working at 75 per cent. less than the regular mechanic, can hire his workmen. What is the necessary consequence? His journeymen must be discharged: his apprentices be idle. What a prospect for young mechanics nearly out of their apprenticeship! Idle, disheartened at the prospect ahead, they are too apt to become the dupes of experienced villains, whose knowledge of mechanics has been obtained in the prison, and whose morals, bad before, have been confirmed there. This is no idle imagining: witness the reiterated crimes and convictions of a large portion of the present tenants of our prisons, the daily calendar of our criminal courts, and the testimony of experienced officers presiding over them. Is this not a serious evil to mechanics, and through them to the whole community? And should not the whole community be aroused to check this monstrous—this growing evil?

This system has grown up in our age; let not the next age be cursed with it, nor let the reproach be cast upon us by the unborn thousands who are to come after us. Behold! this our fathers left us! We must, with one accord, demand speedy redress.

In short, Mr. Chairman, we must dispute every inch of ground with those harpies, alias contractors, agents, abetters, &c., of State Prison Monopoly, and continue to do so, until the last ballot box is presented to us for our suffrage. We must meet them at every corner, and on every point.

We have been asked—and the question will be reiterated in the legislative hall—what would you have done with the convicts? Let us sternly reply—it is the right of freemen to complain of grievances, and the duty of legislators to find means of redress.

The fathers of our revolution when they found aggression succeeded by aggression, did not stop to calculate what kind of government they would establish after achieving the independence of their country. No! they buckled on their armor, and tugged through a seven years' war, and relied on the wisdom of their countrymen, and a righteous Providence, to guide them in their subsequent course. Were they disappointed? Did they act indiscreetly? No: events proved they were correct. They fought—they conqured—and what an inheritance did they leave to their children! They formed a government that secured blessings to their descendants, and is the theme of praise and admiration throughout the civilized world. Let not, then, the stigma rest on this age, that our legislators know not what to do. If there are those who will not, or those who cannot, we must endeavor to send to our Legislature those who both can and will redress our wrongs.

NEW-YORK AMERICAN.

OCTOBER 25—31, 1834.

LITERARY NOTICES.

THE CONNEXION OF THE PHYSICAL SCIENCES—BY MRS. SOMERVILLE, 1vol. Phil. KEY & BIDDLE.

Man can no longer boast of having the domain of science to himself. Mrs. Somerville, Miss Martineau, and others, have boldly and successfully explored those paths heretofere denied to, or avoided by, women; and in the lessons they teach us of astronomy, of political economy, and now in the volume before us, of the connexion between all the physical sciences—they prove their title to the rank of competent masters. For a book, however, of general utility—and such a one might be made, we apprehend, on this subject—the volume before us assumes too great familiarity with, and progress in, science, on the part of readers. It is not intelligible to those who have only a passing knowledge of the general laws and phenomena of physical science.

THE HISTORY OF ENGLAND FROM THE EARLIEST TIMES TO THE YEAR 1588; by SIR JAS. MACKINTOSH, 1 vol. 8vo.: CAREY, LEA & BLANCHARD.—Death interrupted the eloquent writer of this history 'ere he had yet completed the volume now published. It was continued; and the work will be completed, it is promised, by those who, having possessed themselves thoroughly of the spirit in which Mackintosh had entered upon the work, have also possessed themselves of all the materials and notes prepared by him.

The edition we have now before us is in a handsome well printed 8vo., with double columns. A previous edition in 12mo., was, as our readers were at the time apprized, issued some time ago by the same publishers as a part of their re-publication of Dr. Lardner's Cyclopædia, for which work this history was originally undertaken by *Sir Jas. Mackintosh*.

THE SOUTHERN LITERARY MESSENGER, No. II. *Richmond, (Va.)* T. W. WHITE.—We like this second number, and are pleased to learn, that the public liked the first so well as to give encouragement to the proprietor to persevere. We, however, would prefer this periodical in a monthly, rather than in a semi-weekly form; and such we suspect would be the general view of those who desire to preserve their numbers.

There is variety and talent in both the prose and poetical contents. Too much space, however, is perhaps given to the extract from the Pilgrims of the Rhine, now no longer a new book.

The annexed letter from Mr. Wirt, written not a great while before his lamented death, will be eagerly read. It was written, as is stated, under the following circumstances:

"A young gentleman who is about to leave the walls of a University, and looks to the law as his profession, who is not related to or connected with Mr. WIRT, nor even acquainted with him, and knows him only as an ornament to his profession and his country is induced by the high estimate he has formed of his character, and the great confidence that might be reposed in any advice that he would give, to ask at his hand some instruction as to the course of study best to be pursued." Mr. Wirt replied thus:

Baltimore, December 20, 1833.

MY DEAR SIR: Your letter, dated "University of ——, December 12," was received on yesterday morning—and although it finds me extremely busy in preparing for the Supreme Court of the United States, I am so much pleased with its spirit, that I cannot reconcile it to myself to let it pass unanswered. If I were ever so well qualified to advise you, to which I do not pretend, but little good could be done by a single letter, and I have not time for more.—Knowing nothing of the peculiarities of your mental character, I can give no advice adapted to your peculiar case. I am persuaded that education may be so directed by a sagacious and skilful teacher, as to prune and repress those faculties of the pupil which are too prone to luxuriance, and to train and invigorate those which are disproportionately weak or slow; so as to create a just balance among the powers, and enable the mind to act with the highest effect of which it is capable. But it requires a previous acquaintance with the student, to ascertain the natural condition of his various powers, in order to know which requires the spur and which the rein. In some minds imagination overpowers and smothers all the other faculties: in others, reason, like a sturdy oak, throws all the rest into a sickly shade.—Some men have a morbid passion for the study of poetry—others, of mathematics, &c. &c. All this may be corrected by discipline, so far as it may be judicious to correct it. But the physician must understand the disease, and become acquainted with all the idiosyncracies of the patient, before he can prescribe. I have no advantage of this kind with regard to you; and to prescribe by conjecture, would require me to conjecture every possible case that *may* be yours, and to prescribe for each, which would call for a ponderous volume instead of a letter. I believe that in all sound minds the germ of all the faculties exists, and may, by skilful management be wooed into expansion; but they exist naturally, in different degrees of health and strength, and as this matter is generally left to the impulses of nature in each individual, the healthiest and strongest germs get the start—give impulse and direction to the efforts of each mind—stamp its character and shape its destiny. As education, therefore, now stands among us, each man must be his own preceptor in this respect, and by turning his eyes upon himself, and describing the comparative action of his own powers, discover which of them requires most tone—which, if any, less. We must take care, however, not to make an erroneous estimate of the relative value of the faculties, and thus commit the sad mistake of cultivating the showy at the expense of the solid. With these preliminary remarks, by way of explaining why I cannot be more particular in regard to your case, permit me, instead of chalking out a course of study by furnishing you with lists of books and the order in which they should be read, (and no list of books and course of study would be equally proper for all minds,) to close this letter with a few general remarks.

If your *spirit* be as stout and pure as your letter indicates, you require little advice beyond that which you will find within the walls of your University. A brave and pure spirit is worth more than '*half the battle*,' not only in preparing for life, but in all its conflicts. *Take it for granted, that there is no excellence without great labor.* No mere aspirations for eminence, however ardent, will do the business. Wishing, and sighing, and imagining, and dreaming of greatness, will never make you great. If you would get to the mountain's top on which the temple of fame stands, it will not do to *stand still*, looking, admiring, and wishing you were there. You must gird up your loins, and go to work with all the indomitable energy of Hannibal scaling the Alps.—Laborious study, and diligent observation of the world, are both indispensable to the attainment of eminence. By the former, you must make yourself master of all that is known of science and letters: by the latter, you must know *man*, at large, and particularly the character and genius of your own countrymen. You must cultivate assiduously the habits of *reading, thinking*, and *observing*. Understand your own language, grammatically, critically, thoroughly: learning its origin, or rather various origins, which you may learn from Johnson's and Webster's prefaces to their large dictionaries. Learn all that is delicate and beautiful, as well as strong, in the language, and master all its stores of opulence. You will find a rich mine of instruction in the splendid language of Burke. His diction is frequently magnificent; sometimes too gorgeous, I think, for a chaste and correct taste; but he will show you all the wealth of your language. You must, by ardent study and practice, acquire for yourself a *mastery* of the language, and be able both to speak and to write it, promptly, easily, elegantly, and with that variety of style which different subjects, different hearers, and different readers, are continually requiring—You must have such a command of it as to be able to adapt yourself, with intiutive quickness and ease, to every situation in which you may chance to be placed—and you will find no great difficulty in this, if you have the *copia verborum* and a correct taste. With this study of the language you must take care to unite the habits already mentioned—the diligent observation, of all that is passing around you, and *active, close*, and *useful thinking*. If you have access to Franklin's works, read them carefully, particularly his third volume, and you will know what I mean by *the habits of observing and thinking*. We cannot all be *Franklins*, it is true; but, by imitating his mental habits and unwearied industry, we may reach an eminence we should never otherwise attain. Nor would he have been the Franklin he was, if he had permitted himself to be discouraged by the reflection that we cannot all be *Newtons*. It is our business to make the most of our own talents and opportunities, and instead of discouraging ourselves by comparisons and imaginary impossibilities, to believe all things possible, as indeed almost all things are, to a spirit bravely and firmly resolved. Franklin was a fine model of *a practical man* as contradistinguished from a *visionary theorist*, as men of genius are very apt to be.—He was great in that greatest of all good qualities, *sound, strong, common sense*. A mere book-worm is a miserable driveller; and a mere genius, a thing of gossamer, fit only for the winds to sport with. Direct your intellectual efforts principally to the cultivation of the strong masculine qualities of the mind. Learn (I repeat it) *to think—think deeply, comprehensively, powerfully*—and learn the simple nervous language which is appropriate to that kind of thinking. Read the legal and political arguments of Chief Justice Marshall, and those of Alexander Hamilton, which are coming out. Read them, *study them*; and observe with what an omnipotent sweep of thought they range over the whole field of every subject they take in hand—and *that* with a scythe so ample, and so keen, that not a straw is left standing behind them. Brace yourself up to these great efforts. Strike for this giant character of mind, and leave prettiness and frivolity for triflers. There is nothing in your letter that suggests the necessity of this admonition; I make it merely with reference to that tendency to efflorescence which I have occasionally heard charged to Southern genius. It is perfectly consistent with these herculean habits of thinking, to be a laborious student, and to know all that books can teach. This extensive acquisition is necessary, not only to teach you how far science has advanced in every direction, and where the *terra incognita* begins, into which genius is to direct its future discoveries, but to teach you also the strength and the weakness of the human intellect—how far it is permitted us to go, and where the penetration of man is forced, by its own impotence and the nature of the subject, to give up the pursuit;—and when you have mastered all the past conquests of science, you will understand what Socrates meant by saying, that he knew only enough to be sure that *he knew nothing—nothing, compared with that illimitable tract that lies beyond the reach of our faculties*. You must never be satisfied with the surface of things: probe them to the bottom, and let nothing go till you understand it as thoroughly as your powers will enable you. Seize the moment of excited curiosity on any subject to solve your doubts; for if you let it pass, the desire may never return, and you may remain in ignorance. The habits which I have been recommending are not merely for college, but for life. Franklin's habits of constant and deep excogitation clung to him to his latest hour. Form these habits now; learn all that may be learned at your University, and bring all your acquisitions and your habits to the study of the law, which you say is to be your profession;—and when you come to this study, come resolved to master it—not to play in its shallows, but to sound its depths. There is no knowing what a mind greatly and firmly resolved, may achieve in this department of science, as well as every other. Resolve to be the first lawyer of your age, in the depth, extent, variety, and accuracy of your legal learning. Master the science of pleading—master Coke upon Littleton—and Coke's and Plowden's Reports—master Fearne on Contingent Remainders and Executory Devises, till you can sport and play familiarly with its most subtle distinctions. Lay your foundation deep, and broad, and strong, and you will find the superstructure comparatively light work. It is not by shrinking from the difficult parts of the science, but by courting them, grappling with them, and overcoming them, that a man rises to professional greatness. There is a deal of learning that is dry, dark, cold, revolting—but it is an old feudal castle, in perfect preservation, which the legal architect, who aspires to the first honors of his profession, will delight to explore, and learn all the uses to which its various parts used to be put: and he will the better understand, enjoy and relish the progressive improvements of the science in modern times. You must be a master in every branch of the science that belongs to your profession—the law of nature and of nations—the civilians, the jus-perconsult,

the maritime law, &c., the chart and outline of all which you will see in Blackstone's Commentaries. Thus covered with the panoply of professional learning, a master of the pleadings, practice and cases, and at the same time a *great constitutional and philosophic lawyer*, you must keep way also, with the march of general science. Do you think this requiring too much? Look at Brougham, and see what man can do if well armed and well resolved. With a load of *professional duties* that would *of themselves*, have been appalling to the most of *our* countrymen, he *stood nevertheless, at the head of his party in the House of Commons*, and, *at the same time, set in motion and superintended various primary schools and various periodical works, the most instructive and useful that ever issued from the British press, to which he furnished, with his own pen some of the most masterly contributions*, and yet found time *not only to keep pace* with the progress of the *arts and sciences*, but *to keep at the head of those whose peculiar and exclusive occupations these arts and sciences were. There* is a model of *industry and usefulness* worthy of all your emulation. You must, indeed, be a great lawyer! but it will not do to be a mere lawyer—more especially as you are very properly turning your mind, also, to the political service of your country, and to the study and practice of eloquence. You must, therefore, be a political lawyer and historian; thoroughly versed in the constitution, and laws of your country, and fully acquainted with *all its statistics*, and the history of all the leading measures which have distinguished the several administrations. You must study the debates in Congress, and observe what have been the actual effects upon the country of the various measures that have been the most strenuously contested in their origin. You must be a master of the science of political economy, and especially of *financiering*, of which so few of our young countrymen know any thing. The habit of observing all that is passing, and thinking closely and deeply upon them, demands preeminently an attention to the political course of your country. But it is time to close this letter. You ask for instructions adapted to improvement in eloquence. This is a subject for a treatise, not for a letter. Cicero, however, has summed up the whole art in a few words; it is *apte—distincte—ornate—dicere*"—to speak *to the purpose*—to speak *clearly and distinctly*—to speak *gracefully*:—to be able *to speak to the purpose*, you must understand your subject and all that belongs to it:—and then your *thoughts and method* must be *clear in themselves* and *clearly and distinctly enunciated*:—and lastly, your voice, style, delivery and gesture, must be *graceful and delightfully impressive*. In relation to this subject, I would strenuously advise you to two things: *Compose much, and often, and carefully with reference to this same rule of "apte, distincte, ornate,"* and let your *conversation* have reference to the same objects. I do not mean that you should be *elaborate and formal* in your ordinary conversation. Let it be *perfectly simple and natural*, but *always in good time*, (to speak as the musician,) and well enunciated.

With regard to the style of eloquence that you shall adopt, that must depend very much on your own taste and genius. You are not disposed, I presume, to be an humble imitator of any man? If you are, you may bid farewell to the hope of eminence in this walk. None are mere imitators to whom Nature has given original powers. The ape alone is content with mere imitations. If Nature has bestowed such a portion of the spirit of oratory as can advance you to a high rank in this walk, your manner *will be* your own. In what style of eloquence you are best fitted to excel, you, yourself, if destined to excellence, are the best judge. I can only tell you that the *florid and Asiatic style* is not the taste of the age. The *strong*, and even the *rugged and abrupt*, are far more successful. Bold propositions, boldly and briefly expressed—pithy sentences—nervous common sense—strong phrases—the *feliciter audax* both in language and conception—well compacted periods—sudden and strong masses of light—an apt adage in English or Latin—a keen sarcasm—a merciless personality—a mortal thrust—these are the beauties and deformities that now make a speaker the most interesting. A gentleman and a Christian will conform to the reigning taste so far only as his principles and habits of *decorum* will permit. The florid and Asiatic was never a good style either for a European or an American taste. We require that a man should *speak to the purpose* and *come to the point*—that he should *instruct and convince*. To do this, his mind must move with great strength and power: reason should be manifestly his master faculty—argument should predominate throughout; but these great points secured, wit and fancy may cast their lights around his path, provided the wit be courteous as well as brilliant, and the fancy chaste and modest. But they must be kept well in the back ground, for they are dangerous allies: and a man had better be without them, than to show them in front, or to show them too often.

But I am wearying you, my dear sir, as well as myself. If these few imperfect hints, on subjects so extended and diversified, can be of any service to you, I shall be gratified. They may, at least, convince you that your letter has interested me in your behalf, and that I shall be happy to hear of your future fame and prosperity. I offer you my respects, and tender the compliments of the season.

WM. WIRT.

How beautiful—how wise—how characteristic of the great and pure man who wrote it—is this letter. Alas! that his eloquent lips are closed—who so well teaches the road to eloquence, and that pure charcter removed from among us, when so few are left of public men to supply his place.

MOTHER'S MAGAZINE.—Edited by MRS. WHITTLESEY, and published New York, 146 Nassau street.—Of this work a friend says "although modest and unobtrusive it has already gained many friends and does in reality possess high claims to public notice. It has reached the ninth number of its second year—has upwards of 6,000 subscribers, and is republished in England by two presses. We think that mothers should become acquainted with this truly valuable work—it deserves well at their hands."

THE SELECT JOURNAL OF FOREIGN PERIODICAL LITERATURE.—No. VIII.—*Boston*, CHS. BOWEN.—This is truly a capital number, and well justifies its title of *Select* Journal.—The first article from the Foreign Quarterly Review on the Life and Character of *Duplessis Mornay*, does justice to one of the ablest and purest public men that ever lived—and whom the great renown of his great associate *Sully* has somewhat overshadowed. To Protestants, particularly, this notice of one who stood firmly to his faith, when his King deciding that "Paris was well worth a mass," changed his—is particularly interesting.

The second article from the Edinburgh Review, and the pen of Macaulay, is an admirable view of the Life and Career of William Pitt, Earl of Chatham. In does justice to his merits, and judges impartially his defects, his inconsistencies, his overbearing and intolerant love of power. It must startle the surviving members of the Pitt Club in England, to hear the son of Chatham, the anti-Gallican Champion, treated as he is in this paper, "as the most profuse and *incapable* of War Ministers."

But we have not time to dwell on each paper in this number. Passing to the Critical Notices, we extract from one on the late work of the eloquent *Abbé de La Mennais*, entitled "the Words of a Believer," the following rythmical fragment, on the pains of Exile.

"May God guide the poor exile. He goes wandering over the earth.

"I have passed through various countries: their inhabitants have seen me, and I have seen them; but we have not known each other. The exile is every where alone.

"When at the decline of day I saw the smoke of some cottage rise from the bosom of a valley, I said, 'Happy is he who returns at evening to his fireside and sets himself among those he loves!' The exile is every where alone.

"Whence come those clouds driven by the storm? It drives me along like them. But what matters it? The exile is every where alone.

"Those trees are noble, those flowers are beautiful; but they are not the flowers nor the trees of my country; to me they say nothing. The exile is every where alone.

"That stream flows gently over the meadow, but its murmur is not that which my childhood heard.—To me it recalls no remembrances. The exile is every where alone.

"Those songs are sweet; but the sorrows and the joys which they awake are not my sorrows nor my joys. The exile is every where alone.

"I have been asked, 'Why weepest thou?' but when I have told, no one wept; for no one understood me. The exile is every where alone.

"I have seen old men surrounded by children, as the olive by its branches, but none of these old men called me his son, none of those children called me his brother. The exile is every where alone.

"I have seen young girls smile, with a smile as pure as the dawn, on him they had chosen for a husband; but not one smiled on me. The exile is every where alone.

"I have seen young men, heart to heart, embrace each other as if they wished to have only one existence; but not one pressed my hand. The exile is every where alone.

"There are friends, wives, fathers, brothers, only in our own country. The exile is every where alone.

"Poor exile! cease to lament, every one is banished like thyself, every one beholds father mother, wife, friend, pass away and vanish.

"Our country is not here below; man seeks for it here in vain, that which he mistakes for it is only a resting-place for a night.

"God guide the poor exile! He goes wandering over the earth."

NOVELLETTS OF A TRAVELLER. Edited by H. J. NOTT. 2 vols. New York: *Harper & Brothers.*—The least clever and agreeable part of this book is the commencement,—the Biography of *Thomas Singularity*, Journeyman Printer. Its tone and taste are bad, and its humor elaborate. In the tales and sketches, however, there is more freedom of style, more incident and interesting adventure. The Andalusian Rope-dancer is among the best, in our judgment; though to say truth, so far as Andalusia is concerned, it might have been written in New York or Charleston, without ever having crossed "the waste of waters;" for it lacks that vivid description of scenery, which impresses the reader at once with the conviction, that the author writes from the eye, and not from fancy.

PICTURES OF PRIVATE LIFE. Second Series; by SARAH STICKNEY. Philadelphia: *Key & Biddle.*—If it be a just criticism, which we are not however prepared to admit, on the first series of these pictures, that the religious sentiments they contain are not sufficiently decided, none such can be advanced against the two pictures which make up this volume. Doing good and fulfilling our duty in obedience "to the will of God," is the prominent motive of action, illustrated with delightful talent, in the story of the Misanthrope. The character of Agnes Forrester is charming, and in a great degree original, though we are sure not without a parallel,—we had almost said many a parallel, but that the circumstances under which her character is developed cannot often occur—in real life. The sacrifice of woman's love and dearest earthly hopes to the conviction that the man of her choice takes such views of his duties, obligations and destiny, as are utterly irreconcileable with her own sense of right,—and the overcoming of that fond illusion so natural and so tempting to woman, that love for her may accomplish a reform in the beloved object which all the higher motives of duty to God and man failed of effecting,—are the leading points illustrated, and powerfully illustrated, in the story of the Misanthrope. We commend these Pictures to our readers.

FOREIGN INTELLIGENCE.

LATER INTELLIGENCE FROM EUROPE.—We announced briefly yesterday the arrival of the *Hannibal* from London, with papers to the 26th. We now present some extracts. The remarkable item of intelligence by this ship, is the adoption by the Spanish Cortes, of a bill of rights, which will be found in our columns. It is, we fear, in advance of the intelligence and political knowledge of the nation, and therefore, not likely to be of any great practical benefit at present.

The great Dinner at Edinburgh to Earl Grey, was given on the 15th. No hall in the city was thought

adequate to the company that would assemble on the occasion, so that a building was erected for the express purpose, on the Calton Hill, and so designed as at once to accommodate the largest number, and to render the voice of the speakers audible throughout the whole circuit. It was a very splendid affair. The number present was about 2000.

The Emperor Nicholas is said to have responded to the demand of the Porte for assistance against Mehemet Ali, that his engagement to offer him aid, was only in cases where he was attacked, and not where he was the aggressor.

Another fire had occurred in Moscow by which 200 houses had been destroyed.

The Cholera prevails with great fatality in many parts of Europe and particularly in Sweden. Up to the 19th of September there had been 3179 cases and 1276 deaths of that disease in Stockholm, containing a population of less than 80,000.

London, Saturday, Sept. 20.—The Paris papers are received. The Moniteur gives the following official intelligence received by the French Government from the Bayonne: "A telegraphic despatch of the 16th states, that the Guipuscoans had attempted an attack on Tolosa, but without success.—They were on the 15th in the direction of the passage of Oyarzun. Zumalacarreguy was marching against him with Lorenzo and Figueira. The Junta is at Etchalar. Don Carlos has remained at Biscay." The attacks of the Carlists against Begara, Viana, and Tolosa, indicate a change in their position. Tolosa is an important place, and has a strong garrison; some particulars respecting the attack upon it are, therefore, extremely desirable.

Arana, formerly the companion in arms of Rodil, in Peru, was shot by him, in Bilboa, on the 16th instant, together with the Major Domo of the Marquis de Valespina, and the Secretary of the Junta (Des los Aganos.) They are entrapped by the Spanish frigate Pearla. Rodil has burnt the Duke of Granada's palace to the ground, in revenge for the Duchess of Granada having celebrated Don Carlos' return.

In the Chamber of Procuradores, on the 9th inst. General Burton addressed himself to the President of the Council of Ministers, in the hope that he would communicate to the Chambers the real state of affairs respecting the Civil War in the Northern Provinces.

M. Martinez de la Rosa replied:

"In the northern provinces, more than 40,000 men are on foot, of which number 20,000 are destined to guard the fortified towns, the coasts, and other parts. In the immense plains of Castile are 15,000 men, so that we cannot charge them with inertness. What we want is the means, the pecuniary resources for greater exertion. The real plan of the war should be to occupy all the military points with sufficient forces, and thus to contract the space in which the insurgents act, to force them to lay down their arms. But for this purpose numbers are required; and the equipment, the arming, and the support of the troops, form the largest items in governmental expenses.—We are compelled to regulate our movements by the state of our funds, and we have the consciousness of having discharged our duty."

Spanish Bill of Rights.—The following is the Petition, as approved in the Estate, and read to the Queen on the 11th inst.:

"Petition on the Fundamental Rights of the Spaniards, as approved by the Estate of Procuradores at its last Sittings.

The Procuradores of the kingdom pray your Majesty that you will be pleased to sanction as fundamental rights those which are contained in the following articles:

Article 1. The law protects and consolidates individual liberty.

2 All Spaniards may publish their thoughts by means of the press, without previous censorship; but subject to the laws which repress abuses.

3 No Spaniard can be prosecuted, impressed, arrested, or removed from his dwelling place, except under the circumstances provided for, in the manner prescribed by the law.

4 The law has no retroactive effect, and no Spaniard shall be tried by commissions, but by the tribunals by law established prior to the perpetration of the offence. The same rule applies to civil transactions.

5 The house of no Spaniard can be violated, except under the circumstances which are or may be ordained by law.

6 All Spaniards are equal before the law.

7 Spaniards are equally admissible to all public employments, and all are equally bound to take upon themselves the burden of public service.

8 All Spaniards are bound to pay the taxes voted by the Cortes.

9 Property is inviolable, but is nevertheless subject—

"1. To the obligation of being ceded to the State when so required for any object of public utility, a competent indemnification being always previously awarded by the judgment of impartial men.

2. To penalties imposed by law, and to damages in virtue of sentences legally pronounced—confiscation of property is abolished."

10 The authority of a public functionary who commits any aggression on individual liberty or personal security or property, is responsible conformably to law.

11 The Secretaries of State are responsible for infractions of the fundamental laws, and for the crimes of treason and official extortion.

12 A national guard shall be established for the preservation of public order and the mantenance of the laws. Its organization to be the subject of a law."

The Madrid Correspondent of the Morning Herald, dated the 11th instant, represents the enhanced fears of the French Ambassador, (M. De Rayneval) that a new crisis would occur from the hourly increasing strength of the Democratic party. He, M. De Rayneval stated further, that the insurrection in the Northern Provinces was beginning to cause serious alarm to the Government, and mentioned a report that a rising had taken place in Galacia; that portions of Aragon and Catalonia were in revolt, and that the Urban Guard of Barcelona had refused to march. He concludes by averring that the Treasury was completely exhausted.

The Spanish Ministers have ordered a quantity of waste lands throughout the kingdom to be sold.

A conspiracy has been discovered in the neighborhood of Malaga, and several districts round Carthagena, where an attempt at insurrection was made, and 500 Carlists turned out.

[*From the Messager.*]

Paris, Sept. 18.—The Renovateur makes the following reflections on the report of the majority of the Finance Committee to the Chamber of Procuradores:

"A declaration for the possibility of Spain to pay all its debts, the homage paid to the Revolutionary principle by annihilating the Royal Loans, and recognize those of the Cortes. There is in this report more than a bankruptcy—there is an entire revolution. The men who are the authors of this report have calculated all the effects of it, and seem determined not to make any concession. We are assured that the Secretary of the Committee has written to Paris—'Though the French Government were to fall on its knees before us, we never will acknowledge the loans contracted since the year 1823 by Ferdinand VII."

A French Journal is going to be published at Madrid under the title of Courrier du Nord. The Royal License has been given to M. Morat.

His Majesty's brig Espoir, arrived at Falmouth, on Wednesday, from Lisbon, whence she sailed on the 8th. The Minister of Finance has made his report, in which very flattering prospects to the trade of Portugal are held out, and it is upon the whole calculated to inspire confidence. The critical state of the Regent's health has, of necessity, given greater urgency to the consideration of the young Queen's marriage, which now becomes a question of the first importance.

This subject is accordingly attracting great attention, and was at the date of these accounts under deliberation in the Council, where it was expected that the matter would be immediately concluded with the young Duke of Leuchtenberg, the Empress's brother, whose pretensions appear to have received more general favor than any other candidate for the honor of Donna Maria's hand.

The protest of Don Miguel against the treaty which he signed previously to his leaving Portugal, is held to be an authentic document; and consequently no payment will be made to him on account of the pension to which he would have been entitled if he had performed his part of the treaty.

Later from Europe.—By the packet ship *Independence*, Capt. Nye, from Liverpool, there are papers of the 23d, from London.

The Spanish "bill of rights" had received the sanction of the Cortes, and only waited for that of the Queen, which it will not be deemed prudent to withhold.

The *guerilla* warfare between the partisans of *Don Carlos* and the Queen, assumes no more certainty, or decisive character, than heretofore.

The report of the Finance Committee still engages much attention in the French papers, and when the grounds of the decision are considered, that report will be found a very remarkable document. A short extract which we published from the Renovateur of Saturday, was sufficient to direct public attention to the main principles of the resolution adopted by the majority of the committee. They do not enter into the financial ability of Spain to pay the debt, but they deny its validity; they do not, by refusing to pay the loans contracted by Ferdinand, confess to an act of bankruptcy; they proudly say they never borrowed the money, that they do not owe it, and, therefore, that they will not pay it.—[Courier.]

[*From the Alexandria Phenix.*]

Latest from the West Indies—*Dreadful Hurricane at Dominica.*—By the Brig *Edward*, Capt. D. B. Smith, arrived at this port from Barbadoes, whence she sailed on the 5th, we have received files of Barbadoes papers to that date.

The Islands generally continued quiet, but the laborers were very lazy, and not inclined to work when they could avoid it.

These papers give us an account of a most dreadful and destructive hurricane, which occurred on the night of the 20th September, on the Island of Dominica. The works on two-thirds of the principal sugar estates were levelled to the ground, the canes blown flat to the earth, and in many instances buried in the mud and blown from the soil; every description of provisions aboveground completely swept away, and the face of the country, which exhibited before the utmost luxuriance of vegetation, changed to the appearance of a general conflagration having passed over it. There are not 50,000 feet of lumber in the island, nor 100,000 shingles. Every vessel that was in the roads at the time shared the same fate, viz: the sloops Dolphin and Antelope, and a small sloop from Montserrat. An American schooner was driven on shore, bottom up, on the south end of the Island, and opposite to Martinique. The offices, barracks and Hospital at Morne Bruce, are mostly blown down, and those standing, in such a dilapidated state as to make them unsafe to occupy. Every building on the garrison has either been crushed to ruins or has suffered considerably—the spacious Hospital, lately built on an improved plan, has been partly unroofed, and the Barrack Master's and Adjutant's offices have been entirely destroyed, and it was with great difficulty that the troops escaped without loss of life. The left side of the Government House was blown down, and the other parts of the building partially damaged. The office of the Auxiliary Commissioners of Compensation, adjoining those premises, has been materially injured, and a great many of their original documents destroyed.—The new Commissariat building—the Custom-House, the Court-House—Market-House—the Jail, and the Protestant Church, and almost every other building in town, have suffered considerable injury from the effects of the hurricane. The Mercantile Houses of Messrs. Thomas Laing & Co., Messrs. James Garraway & Co., and Thomas W. Doyle, Esq. on account of their proximity to sea, have also experienced most heavy losses.

Throughout the whole island, and on every estate, the most dreadful destruction took place, the full account of which would fill a column.

The northern part of Martinique has suffered severely, and many vessels have been lost. St. Pierre did not escape, and considerable loss has been sustained at Fort Royal.

Great fears were entertained that the people of Dominica would suffer for the want of food, and measures were taken at Barbadoes and elsewhere to send supplies to the suffering inhabitants.

All accounts go to show that this has been one of the most destructive hurricanes ever experienced in the West Indies.

SUMMARY.

Literary Notice.—It is with satisfaction we announce that *John P. Haven*, 148 Nassau street, has in press, and will publish soon, *A Sketch of Chinese History, ancient and modern:* comprising a retrospect of the foreign intercourse and trade with China, illustrated by a new and corrected map of the Empire, by the Rev. Charles Gutzlaff, now and for many

years past a resident in that country. A handsome portrait of Gutzlaff will accompany the work.

Those who read *Gutzlaff's* first publication, will look eagerly for that now promised.

The Chinese Lady will be exhibited at house No. 8 Park place, as soon as the necessary Furniture is landed from the Washington.—[Jour. Com.]

☞ We are requested to say that passengers for Philadelphia will leave New York in the Rail Road Line on Monday, 27th inst. at 7 o'clock, A. M.—The 6 and 10 o'clock line, after this date, will be discontinued for the season.

Steamboat Novelty Sunk.—This boat, while coming down from Albany, on Thursday night, in tow of the steamboat Oliver Ellsworth, struck a hammock on the Overslaugh amidship, and broke her back, and at high tide the water is about four feet in her cabin. The N. had a quantity of Nott's stoves on freight, but no passengers. She remained in the above situation on Saturday when the De Witt Clinton passed, but it is probable that she will be raised soon. The O. E. was without her tow-boats, having been chartered to bring the Novelty to this city—but when approaching the Overslaugh, it is supposed that she found she could not carry her over it, and intended to return with her to Albany—while winding to do so, the Novelty struck as above stated.

[*From the Newbern Spectator, of Oct.* 19.]

A gentleman informs us that eight families of his acquaintance, in an adjoining county, are making active preparation to emigrate to the West. Poor Carolina! dearly loved as you are by your sons, the strong ties of affection must yield to the apathy and mismanagement which portend nothing but poverty and ruin.

The new Cotton crop begins to come in more rapidly. About one hundred bales have been sold within the week, at from 11 3-3 to 13 cents.

[*From the Nashville Republican of* 14*th inst.*]

The Hermitage Burnt.—Yesterday evening about 4 o'clock, the roof of the Hermitage was discovered to be on fire, and attempts to arrest the progress of the flames proving unavailing, the entire edifice, with the exception of the room attached to the northern end, and used as a dining room, was in a few hours consumed. The valuable furniture in the lower story was fortunately saved, though much broken and otherwise injured in getting it out. That in the second story was, we understand, chiefly destroyed. The fire is supposed to have been communicated to the roof by the falling of a spark from one of the chimneys; and there being at the time a light breeze from the North West, the progress of the flames was proportionably rapid. The numerous and valuable private papers of the President were probably all preserved.

We need not add that the event has occasioned to this community deep and universal regret.

Perilous Balloon Ascension in Charleston S. C.—The Charleston Courier of 23d instant, (Thursday last) states that a Mr. *Elliott* of Baltimore ascended from Charleston on the afternoon of 22nd, and was borne forthwith out to sea. Intense anxiety was felt for his safety, which in a Postscript is thus announced.

Postscript.—12 o'clock, Midnight.—We are happy to have it in our power to say, that Mr. Elliott, the Æronaut, has just reached the city. He informs us that he ascended to the height of between 3 1-2 and 4 miles, and was in the air about one hour and three quarters, having been unable to descend earlier on account of some difficulty in opening the valve of the Balloon. When he descended, it was perfectly dark, and he alighted in the water, 10 or 12 miles out side of the Bar, where he remained about half an hour, supported by the Balloon, when a skiff from the pilot boat *Cora*, Capt. Aldert, came to his relief, extricated him from his very perilous situation, and took him on board the boat, from which he was taken, in the vicinity of Sullivan's Island, by the steam boat *Etiwan*, Captain Sassard, which boat (much to the credit of Capt. S. and several gentlemen who took a very warm interest in the fate of the fearless Æronaut) had been dispatched to his assistance at a late hour of the night. Much anxiety was felt by our citizens, for Mr. Elliott's safety, and we feel assured that his safe return will be hailed with high gratification. We understand that it is his intention to make another ascension, and we hope that the liberality of our citizens on the present occasion, will warrant him in repeating the dangerous experiment. We are glad to announce that the Balloon was saved, having sustained but slight injury.

The Editor of the St. Louis Republican, says it is very evident that a "searching operation" is going on somewhere in the Post Office Department, for he had just received several papers dated in December 1833"—only ten months old!

Lightning.—Mr. Randall, pilot of the steamboat Michigan, was instantly killed by lightning, at St. Louis, Mo. on the 8th instant. The unfortunate man was standing in the street at the time, near the Missouri Hotel.—[Courier.]

Quebec, Friday, Oct. 17.—We experienced today one of the dark days which occur every two or three years, about the fall of the year. It was perhaps more remarkably dark than any for a number of years past. The atmosphere was almost perfectly calm, and the thermometer at about 50 degrees of Fahrenheit. There was very little haze in the southern hemisphere; but particularly over head, and to the north, the sky was nearly obscured by thick clouds of a dark color, in motion from west to east, which, as they grow less dense, gave the whole air a dark orange tinge. From half past 2 to 5 o'clock, it was necessary to light candles to transact any ordinary business, and there was not more light than exactly at the first dawn of day. About four o'clock, the dark orange of the atmosphere began to assume a white straw color. There had been some rain in the interval, and the thermometer had fallen four or five degrees, but rose again to fifty. The clouds over head moved more rapidly, but still from west to east while a haze prevailed along the earth, with the same dead calm, and occasional rain. A light breeze sprang up from the south west, and light began to increase, until it resumed its usual force on a cloudy day, at a quarter past five.

It seems difficult to account for these appearances. The whole upper strata only of the atmosphere are suddenly much condensed, and surcharged with vapor and smoke, while along the earth itself you can see the distant mountains. It is also remarkable that when such days occur while snow lies on the ground, it is found covered with a kind of dust or ashes; and hence they are supposed to be produced, in some measure, by the smoke of fires driven eastward, and occupying a fixed spot during the calm weather.

We learn that the President of the United States has appointed Henry D. Gilpin, Esq. (at present District Attorney for the Eastern District of Pennsylvania) Governor of the Territory of Michigan—in the stead of Gen. Porter, Esq., deceased.—[U. S. Gaz.]

Massacre.—A letter from Batavia (East Indies) dated April 23d, announces the death of Captain Philip F. Livingston, formerly an officer of the U. S. Navy, by the hand of violence, together with six other persons on board his Ship, the Matilda of Batavia, bound from that port to some other place in the East, with a cargo of salt, and $250,000 in specie belong to the Dutch government. The murderers succeeded in their object, which was to get possession of the money, and having scuttled the vessel, which soon after sunk, they landed on a neighboring shore. Captain Livingston was a son of Judge William Livingston, of Kings county,—was born at Flatbush, L. I., and was about 48 years of age. The Matilda was owned by Messrs. Payne, Sticker & Co., of Batavia.

Jewish Literature.—That any one who has studied the poetry, history, and philosophy of the Hebrews, even merely as specimens of composition, should lightly esteem them, is impossible. In lyric flow and fire, in crushing force, in majesty that seems still to echo the awful sounds once heard beneath the thundering clouds of Sinai, the poetry of the ancient Scriptures is the most superb that ever burned within the breast of man. The picturesque simplicity of their narrative gives an equal charm to the historical books. Vigour, beauty, sententiousness, variety, enrich and adorn the ethical parts of the collection. Nor is that seeming artlessness, which constitutes a principal charm of these writings, either naturally incompatible with the observance of certain rules, or actually uncontrolled by such as denote an intimate acquaintance with the management of style.—[From an Article on Literature, by Sir D. K. Sandford, in "Popular Encyclopædia."]

The Germans.—The Germans are only copyists in manners, and often very bad copyists; but they are at least a moral people; and their national literature, which is rich, because it contains quantities of pure gold, though mixed up with masses of dross, has generally a moral and religious tendency; and of this their manners must always, to a certain extent, bear the impress. German women, too, are in general highly educated and accomplished; and young unmarried women mix in society, which thus acquires that tone of elegance their presence can alone confer. I shall give you a lecture on German literature before you enter upon your travels; at present I can only warn you against believing any thing that the Germans themselves, or English liberals and reviewers, tell you on the subject. Credit not one word of what they say about *der Meister*, as they call Goethe; and never open one of his books unless you want a good nap. *Faust*, distinguished for nothing but very bad taste, is but a dressing up of some fifty old tales, stories, and dramas, on the same subject: it is constantly appealed to as something very fine; but you never hear passages quoted from memory, nor does it contain a single one worth recollecting. We have a Faust in English, either by Marlow, Haywood, or one of the other old masters, that is worth all the German Fausts a hundred times over. Schiller is the only national poet of Germany; and high as he deservedly ranks, he is still very much overrated. Herder, indeed, is the only writer of eminence that is not overrated.—[Frazer's Magazine.]

Turkish Manufactures.—The government has dedicated to the encouragement of industry, its first moments of tranquility. A manufactory of *fez* (red woollen caps worn by the Turks) has been working at Constantinople for the last 18 months. The supply of these caps, at least of the qualities for the use of the Government, was obtained from the manufactories of Tunis. The French and the Italians never could attain the perfection of the Tuisians. At the request of the Sultan, the Bey sent over a number of workmen, and manufacturing was done at Constantinople under the direction of Eumer Lufti, but he soon perceived that the men worked unwillingly, and did all in their power to frustrate his endeavors, well aware that his country was about to lose its monopoly. They were, in consequence, soon discharged: but the first notions having been learned by natives who were placed with them at the beginning, and Eumer Lufti having paid the greatest attention to the whole process, 4500 caps are now made monthly, and no doubt in a short time the quantity will be 15,000 in the like time. These caps, not inferior to those from Tunis, especially in respect to the solidity and colour, things extremely difficult to arrive at, stand the government in much less, notwithstanding the great expense attendant upon the setting to work a new establishment. Too much praise cannot be given to Eumer Lufti for his ability and perseverance. This manufactory will be very useful as a means of employment to the poor classes. The government has some idea of establishing a woollen cloth manufactory, which would have been a source of great economy, but the project has been abandoned.—[Ottoman Moniteur.]

Mortality in Paris.—The general report of the labors of the Council of Salubrity for 1829, has just been sent to the Academy. The chapter relative to the mortality in Paris gives the following results:—In the course of the year, 1148 males and 1448 females died of pulmonary consumption. It is from the age of 10 to 50 that this disease is most destructive. It is to be remarked that nearly one fourth more females than males died from this disease, and the proportion is greater still in 1827 and 1828. Inflamation of the chest, which may be said to be the pulmonary consumption of old people, destroyed 957 males and 1132 females. Only 194 males died from aneurism of the heart, while 396 females died. This difference is attributed by the Council of Salubrity, in a great measure, to the injurious pressure of stays. Schirrus has destroyed 419 females, and only 105 males. Inflamation of the stomach has been fatal to 840 males and 1103 females; inflamation of the bowels, to 1171 males, and 1103 females: those who died from those two latter diseases have been principally under seven years of age. Of convulsions, 664 boys, and 746 girls have died, generally before attaining their fifth year. Inflamation of the lungs has destroyed 863 males and 872 females. Apoplexy counts 542 males and 424 female victims, almost all between 30 and 85 years of age. Four hundred and nine females died of inflamation of the peritoneum, and only 125 males; the females who died from this disease were generally between the age of 20 and 35; the males from 25 to 45.

Extract of a letter to the Editor, dated Rochester, Monday, October 20, 7 P. M.

FIRE AT ROCHESTER.—I arrived here at five this afternoon from Bath. At half past six I heard the alarm fire bell, and on going into the street I saw the flames issuing from a large new four story brick store No. — Exchange street, occupied by Messrs. E. F. & A. G. Brown, wholesale grocers. The engines were on the ground in a very few minutes, but for want of long ladders they were unable to play into the interior of the third and fourth stories, in consequence of which the building and most of its contents were entirely destroyed. The fire commenced, I believe, in the third story, and but for the want of long ladders in time, might have been extinguished with partial damage. No other building was injured, except the one adjoining on the south, the roof of which was demolished by the falling of the gable end and chimnies. Several persons were in great danger, at the time the heavy front cornice fell and slid down on the ladders to the pavement. I am as yet unable to ascertain if any are seriously injured.

I have witnessed many an appalling fire in New York, but have never yet seen one of a single building so brilliant. The upper stories were filled with light goods, wooden ware, &c. &c. There were one or two explosions, probably of spirits or small parcels of powder, which for a moment seemed to check the firemen; but they returned again in a few minutes to the charge. The falling of the immense brick wall upon the frail shingle roof of the adjoining building, upon which were several firemen with a hose and pipe, was indeed a moment of intense feeling and interest. It seemed impossible that all could escape. One universal shudder went through the crowd which thronged the street. For a moment all was silence; when one man was seen a moment after to arise from the roof near that part which went down, and make his way on to the next building. "Is any one hurt," ran through the crowd. No one could answer. It is believed that all escaped.

The property was insured I understand for $10,000—the loss probably much greater.

Accident.—The Steamboat Erie, on her passage down from Albany yesterday, when near Newburg, broke one of her shafts with other damage. She reached the city with one wheel.—[ibid.]

Destructive Fire.—The large Store-houses on the wharf at Rhienbeck, Dutchess county, New York, owned by Capt. Bergh, and M. T. Schryver, Esq. containing large quantities of grain and goods, were totally destroyed by fire yesterday at 11 o'clock, A. M. Fire supposed to have been communicated by sparks from the chimney of a Steamboat, in stopping at the wharf. Loss about $10,000.—[Daily Adv.]

Animal Sagacity.—About 3 o'clock on Thursday morning, a grocery store in Grand street, between Eldridge and Allen, took fire inside, a clerk, and large watch dog sleeping therein. The clerk would inevitably have been burnt to death, or suffocated but for the sagacity of the dog, who jumped upon his bed, put his paws upon his body, and pulled him by the shoulder, until he aroused him from his almost death slumbers. He then rushed out of the store, followed by the dog, and the arrival of help soon extinguished the fire—but for the dog all would probably have perished.

Shipwreck.—The fine packet schooner Norfolk, Osborn, from Norfolk for New York, went ashore at Great Egg Harbor on Sunday morning last, about 6 o'clock, and will be lost. Cargo supposed worth about $7000, partly landed. The materials and cargo saved will be sold on Monday, 27th inst., unless otherwise ordered by the persons interested.

A Luxury.—We were yesterday permitted to examine a segar, presented by the commander of an English ship to the master of one of our whalemen, just returned from the Pacific, as a memorial of the imitative power of our eastern brethren. This segar was taken from a large parcel which the Briton had purchased of the Yankee, with intent to solace himself occasionally with a glorious puff of the pure Indian weed; and the disappointment of Mr. Bull's nose, so sharply bent on being regaled with the true Virginia fragrance, at perceiving an odor exceedingly unlike that of the anticipated tobacco, may be readily imagined. Like the sample now shown us, his whole stock of smoke tubes consisted of segar shaped rolls of *oak leaves* and *skunk cabbage*, without even a pinch of snuff intermixed, to give them a taint.—[Nantucket Enquiror.]

John Swift, Esq., was on Tuesday, unanimously re-elected Mayor of Philadelphia by the Common Council of that city.—[Jour. Com.]

Prince Puckler Muskau.—It appears by the last foreign papers, that this Prince, who has been for some time expected to arrive in this country, has been engaged in a duel. The Prince engaged a surgeon at Liege, to whom, on their way to the battle ground he explained as follows:—"In one of my romances I made use of the ordinary means of giving interest to the scenes of my drama, and represented my hero as giving himself up to violent passions, and all those irregularities which are their inevitable consequences. I gave him a name chosen at venture, for you know in every fiction the principal actor must necessarily be invested with one. By one of those strange perversities of chance which cannot be foreseen, there happened to be in the north a person of great consideration bearing precisely the same name, and into whose hands my work fell. He took what was a mere production of my imagination for an intended and outrageous personal insult. I was then at Paris. Severe complaints were made to the diplomatic agents there, which at length reached me. I gave every possible explanation in my power; but they were not sufficient to satisfy the susceptibility of the party offended, and a reparation by way of arms was demanded and granted. For this purpose we are now on our way to A——, where I shall see my adversary for the first and probably for the only time in my life." They at length arrived at the place of rendezvous. The adversary was beforehand with him. He was a man of noble carriage, and of a serious but prepossessing exterior. All the conditions of the meeting had been regulated beforehand. The combatants were kept at a distance, and only approached in order to exchange shots. Not a word, not a look, established the smallest communication between them. At the given signal they advanced towards each other, and at the instant which had been previously agreed on, the two pistols were simultaneously discharged. One of the champions was wounded in the throat—it was the Prince's adversary—he immediately received the eager attentions which his wound required—fortunately it was slight. A declaration previously agreed on, and expressing reciprocal satisfaction, was immediately exchanged, and the parties separated with the cold and silent ceremonial which had prevailed throughout the meeting. The noble duellists, each of whom had travelled more than one hundred leagues, in conformity with a ridiculous custom which is called a point of honor, returned to their respective homes, one to Paris, the other to Berlin, doubtless not a little pleased to find themselves alive after this little trial at mutual destruction."

M. Armand Carrel, the proscribed editor of the National at Paris, on his escape to Southampton, in England, being asked for his passport, replied that he had none. When he told his name, the authorities and bystanders declaired it was a sufficient passport for him all over England.—[Star.]

A ship for the conveyance of three hundred young women from Dublin and Cork to Sydney, New South Wales, will sail from Dublin as soon as possible. This ship has been taken up by the government in London, and the selection of females has been confined to committees appointed for that purpose in Dublin and Cork. J. D. Pinnock, Esq. of the Colonial office, will proceed to both these cities to superintend the final arrangements for the departure of the emigrants.

A meeting was held in Calcutta on the 5th of April, to consider a suitable manner of commemorating the late Rajah Rammohun Roy. The Rajah's family have performed his funeral obsequies there according to the Hindoo ritual.

Egyptian Cotton Manufactures.—It is now nearly fourteen years since the first attempt was made to introduce the cotton manufacture into Egypt; and the wisdom of the Pasha's policy may be estimated with tolerable accuracy by the result. At present most of the mills are in ruins, and immense heaps of machinery, no longer employed, are covered with rust, and mouldering to decay. Nevertheless, Egypt is haunted by a class of foreign mechanics and adventurers, who adduce the example of England, to prove to the misled Pasha, that a change of machinery and management will quickly convert his mills into a lucrative source of revenue: indeed, I believe they have even gone so far as to allude to the possibility of successfully competing with Manchester and Glasgow. The pasha, in all doubtful matters, generally embraces the most flattering side; for, in his manufacturing schemes, he appears to think nothing beyond his powers of creation. His highness having been informed that coal is to be found in large quantities in Syria, has in consequence adopted the determination of making his own steam engines, to drive an immense number of cotton mills. But these are not to be set up in Egypt, which, he has at length discovered, can never be converted into a manufacturing country. His recent conquests are next to taste of the bitterness of a speculating and cotton-spinning despotism; which, in lieu of encouraging the efforts of private industry, invades the province of the manufacturer and the merchant, and is justly punished with disappointment and chagrin. No reasonable man, therefore, can apprehend any lasting competition from a people ignorant in the extreme, and morally depressed to the lowest depths to which humanity can sink. The peasants are enabled to exist merely that they may labor for the for the government; and, while this continues to be the case, they can never excel. There is only one man in Egypt interested in the success of the manufactures. The Europeans engaged in the mills are, for the most part, unprincipled adventurers, who find their advantage in the ignorance and dilatoriness of the Turks. Receiving their pay, they are content to allow affairs to proceed in their natural course. One of these mechanics, who has resided many years in the country where he is nearly naturalized, has done much for the Pasha and his own friends in Europe, exercising the important functions of engineer and contractor greatly to the satisfaction of his employer; who has discovered the novel method of estimating the qualities of machinery by the exorbitance of its price.—From what has been said on the state of the cotton manufacture in Egypt, and the insurmountable obstacles to its success, arising from the nature of the government, the climate, and the morals of the people, it will be abundantly clear that the Pasha can never become a formidable rival, in that particular branch of industry, even to the least advanced of European nations. It is impossible, however, to regard without indignation the unhappy disposition of a prince, who having once suffered himself to be made the dupe of designing individuals, is too proud to abandon his chimerical projects; while his unfortunate subjects, tormented by his caprice, and ground down by his despotism, are deprived of the miserable consolation of reflecting that the labor, however unproductive to themselves, is advantageous to their master. In closing my remarks on this subject, I shall venture to make one suggestion to the manufacturers of Great Britain; all yarns intended for the Levant should be more twisted than is considered necessary in the European markets. The natives of Syria and Constantinople make use of a species of shirting, woven of hard twisted thread, which gives the fabric a crisp appearance. For this purpose they would consume a large quantity of British yarn, were it spun in the mule, in a contrary direction to that in general practice in our mules; and the quantity consumed would be still more considerable were the English manufacturer to give his article twice the ordinary degree of torsion; the direction of the twist being immaterial."—[St. John's Travels.]

Tea, black and green.—Among the evidence taken by a committee of the House of Commons to ascertain whether it is practicable to distinguish accurately the different denominations of tea, is contained information relating to the tea plant differing from accounts heretofore given. According to the evidence of the Company's officers, the tea plant in China has two distinct varieties, if not species, which respectively yield the *black* and the *green* teas The tree, as is well known, is an evergreen, growing to the height of five or six feet. The pickings of the leaves begin in May, when the plant is in full leaf, but ready to shoot out other leaves.

In the *black* tea plant, the first shoot on the bud coming out, then covered with hair, forms the fine *flowery pekoe*. A few days' more growth makes the hair begin to fall off; the leaf then expands, and becomes the *black leafed pekoe*. Some young shoots have fleshier and finer leaves, which makes the *souchong*. The next best leaves make the *campoi*, the next *congou*, and the refuse and inferior leaves the *bohea*. These are the states in which the black teas are collected by the tea farmers,

The varieties of green tea appear to originate, not from the stages of picking, like the black, but partly from difference of treatment and manipulation, partly from difference of soil. A large proportion of *twankay* tea is the growth of a different district from that which produces the *hysons*. When a tea merchant buys green tea from the farmer, he subjects it to the following process to obtain the varieties; he sifts it through one sieve, which takes out the dust, the *young hyson* and the *gun powder*; then through another sieve, which passes the *small leaf hyson* of commerce; two other sieves successively take out the second and largest degree of size, and what does

not pass the third sieve forms *hyson skin*. The teas then undergo the process of firing, in an iron pan, at a great degree of heat, which gives the leaves a tighter twist, and brings them up to their color.—The tea which passes the first sieve is then put into a winnowing machine, and the fan blows out the light leaf at the farther end, the larger broken leaf at shorter distance. The heavier teas, as the gunpowder and hyson, falls nearer to or further from the hopper, according to the gravity, and are then separated by the winnowing machine. When fairly made, the difference between young hyson and the gunpowder will be this; the young leaf which takes the long twist, will form the young hyson, and that which takes the round twist will form the gunpowder.—[Baltimore American.]

Life Prolonged by Civilization.—If we collect England, Germany, and France, in one group, we find that the average term of mortality which, in that great populous region, was formerly one in thirty people annually, is not at present more than one in thirty eight. This difference reduces the number of deaths throughout these countries from 1,900,000 to less than 1,200,000 persons; and 700,000 lives, or one in eighty three annually, owe their preservation to the social ameliorations effected in the three countries of western Europe whose efforts to obtain this object have been attended with the greatest success. The life of man is thus not only embellished in its course by the advancement of civilization, but is extended by it and rendered less doubtful. The effects of the amelioration of the social condition are to restrain and diminish, in proportion to the population, the annual number of births, and in a still greater degree that of deaths: on the contrary, a great number of births, equalled or even exceeded by that of deaths, is a characteristic sign of a state of barbarism. In the former case, as man in a mass reach the plenitude of their physical and social developement, the population is strong, intelligent, and manly; while it remains in perpetual infancy, whole generations are swept off without being able to profit by the past, —to bring social economy to perfection.—[Philosophical Journal.]

[*From the London Spectator.*]

MADAME JUNOT'S CELEBRATED WOMEN.—The subject of these biographical notices have been hitherto, almost exclusively, either unhappy in their destiny or unamiable in their dispositions. The Third Number contains the memoirs and portraits of Charlotte Corday, the lovely and misguided murderess of Marat; Josephine, the amiable and repudiated wife of Napoleon; Bloody Queen Mary; and a personage less familiar to the reader, and whose career is most remarkable of all—Maryna Mniszech, a Polish lady, who became Czarina of Muscovy.

The adventures of this woman belong to the romance of biography. Her father was an ambitious man, whose ruling passion was flattered by a fortune-teller predicting that his daughter, then a child, should wear a crown. From that moment the idea took possession of his brain; and he not only anticipated the fulfilment of the prediction, but had his daughter reared up in the expectation of her high destiny. It is scarcely to be wondered that the girl also became inoculated with this fever of ambition; but that they should have ultimately accomplished the object for which alone they lived, is strange. Their diseased aspirations found a congenial subject in the person of an impostor, who pretended to be Dmitry, the murdered son of Ivan the Fourth; with whom the father of Maryna contracted his daughter in marriage, on condition of his obtaining possession of the usurped throne of Muscovy. The artificial sympathy which these two deluded creatures entertained for each other, ripened into a strong natural affection; and the overthrow of the usurper and the accession of the pretended rightful heir to the throne of Ivan realized their drama of greatness. Their felicity was, however, shortlived. So soon as the usurper's fate was sealed, doubts were raised as to the legitimacy of the claims of the new Czar: his pretensions would not bear scrutiny; plots were formed against him, and the unhappy man was murdered in the Kremlin. The subsequent career of his widow affords an extraordinary instance of the predominance of the ruling passion. On her way to her native country, she was captured by the troops of a man who, they stated, was her supposed murdered husband, recovered from his wounds. Being led into his presence, she was struck with amazement and disgust, at beholding a loathsome, vile and ill-looking Jew—a brute from whose violence she had formerly rescued a young and helpless maiden. This wretch stimulated only by desire of gain, and encouraged by the success of her husband, had proclaimed himself the murdered Czar: who was thus represented to have twice miraculously escaped the daggers of his enemies. The very extravagance of his pretensions seems to have aided his success; or the people were so eager for a Czar, that they grasped at the shadow of a sovereign. The Jew was at the gates of Moscow, backed by a victorious band of followers; and only wanted the assistance of Maryna to accomplish his object. Urged by her father's entreaties, and stimulated by her own thirst for power, she consented to be a party to the trick, and publicly acknowledged the hateful Jew as her identical husband. She soon found, however, that the impostor sought money only, and not command, and that he had seized upon the vacant throne only to sell his abdication. This she resolved if possible to prevent. Scornfully upbraiding him, she said, "Thou shalt either reign, or die;" and kept a strict guard upon all his movements. At last, in the confusion of a battle that ensued, the wretch contrived to escape, but Maryna, now mad for sovereignty, disguised herself as a soldier, pursued, and brought him back. In defence of her throne, she performed prodigies of valor; but was at length taken and condemned to death. The very night before her intended execution, she was liberated by one of her countrymen, who had loved her from a youth, and had followed her through all the vicissitudes of her fortune. She became his wife, and at the same time mistress of a horde of Cossacks, of which he was the Chieftain. Not contented with a predatory rule, she planned and achieved the conquest of Astracan; where for a short time she once more reigned over a kingdom. But here too her power was of short duration; she was attacked and defeated by the Russians in a pitched battle: and escaping only with life, wandered with her husband and her infant over the frozen steppes of the Oural Mountains; where the miserable group perished by the hands of a troop of soldiers, and found a grave in the snowy desert. History does not furnish a more fearful lesson upon the miseries of false ambition, than in the life of this wretched woman; who but for her father's folly might have equally adorned the world by her talents and her beauty.

The portraits that accompany the large edition of these memoirs, are beautiful and spirited specimens of French lithography. Those in the smaller series, are not only inferior in point of execution, but the faces are unlike, and deficient in character.

One of the sweetest things that Crabb ever wrote, is the following song of a heart-broken maid, cracked by the perfidy of her lover, and sighing gently to be at rest. The melody of the numbers is faultless, and beautifully harmonises with the graceful pathos of the subject:—[Sketches of late English Poets.]

Let me not have this gloomy view
About my room, about my bed,
But morning roses, wet with dew,
To cool my burning brows instead;
As flowers that once in Eden grew,
Let them their fragrant spirits shed,
And every day their sweets renew
Till I, a fading flower, am dead.

O let the herbs I loved to rear
Give to my sense their perfumed breath!
Let them be placed about my bier,
And grace the gloomy house of death.
I'll have my grave beneath a hill,
Which only Lucy's self shall know,
Where runs the pure pellucid rill
Upon its gravelly bed below:
There violets on the borders blow,
And insects their soft light display,
Till, as the morning sunbeams glow,
The cold phosphoric fires decay,
That is the grave to Lucy shown;
The soil a pure and silver sand,
The green cold moss about it grown
Unplucked of all but maiden hand,
In virgin earth, till then unturned,
There let my maiden form be laid;
Nor let my changed clay be spurned,
Nor for new guests that bed be made.

There will the lark, the lamb, in sport,
In air, on earth, securely play;
And Lucy to my grave resort,
As innocent, but not so gay,
I will not have the churchyard ground,
With bones all black and ugly grown,
To press my shivering body round,
Or on my wasted limbs be thrown.

With ribs and skulls I will not sleep
In clammy beds of cold blue clay,
Through which the ringed earth-worms creep,
And on the shrouded bosom prey.
I will not have the bell proclaim
When those sad marriage rites begin,
And boys, without regard or shame,
Press the vile mouldering masses in.

Say not, it is beneath my care,—
I cannot these cold truths allow;
These thoughts may not afflict me there,
But O! they vex and tease me now!
Raise not a turf, nor set a stone,
That man a maiden's grave may trace,
But thou, my Lucy, come alone,
And let affection find the place!

RAILROAD AND CANAL MAP.

☞ THIS long promised Map is now ready for those who wish it. Its size is 34 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

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PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y.
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RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, } *Flat Bars* in
200 do. 1½ do. ⅜ do. } lengths of 14 to 15
40 do. 1¼ do. ⅜ do. } feet counter sunk
300 do. 2 do. ⅜ do. } holes, ends cut at
300 do. 2½ do. ⅜ do. } an angle of 45 de-
soon expected. } grees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2⅛, 2⅜, 2⅝, 3, 3¼, 3½, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.
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The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to.
DEAN WALKER. a3

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☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines; and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

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By order of the Company,
WILLIAM NORRIS, Secretary.
December 2d, 1833.

For further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

MECHANICS MAGAZINE.

THE NUMBER FOR OCTOBER 31, will be ready for delivery to Subscribers on Monday next. It contains numerous articles, and a concise account of the FAIR of the AMERICAN INSTITUTE held at NIBLOS' GARDENS, illustrated with numerous engravings.

☞ MECHANICS' and OTHERS who feel interested in endeavoring to abolish the abominable "STATE PRISON MONOPOLY" are requested to forward to the Editor such facts as come within their knowledge, and they will be published if authenticated.

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There is no publication in our country calculated better to serve the interests of practical men, than the work before us.—*Nantucket Inquirer.*

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The Magazine is well worthy the patronage of every mechanic, and should be taken by every scientific and ingenious man.—*Hartford Times.*

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It is atored with representations and descriptions of improvements in machinery, and of newly invented articles, together with information valuable to every class of citizens.—*U S. Gazette, Philadelphia.*

This is truly an excellent Magazine, and we take pleasure in commending it to the public, especially to that class of community for whom it is particularly intended. It should be in the hands of every mechanic, and if an individual cannot afford to take it alone, let him associate himself with others and procure it; and if attentively read, we believe no intelligent man will consider his money idly spent in its procurement.—*Schenectady Gazette.*

The work needs only to become known to insure it a very extensive circulation. It certainly cannot fail to be highly interesting and useful to the numerous class of persons for whom it is particularly designed.—*Paterson Intelligencer.*

It forms a truly valuable repository, alike suitable to the drawing room and to the cottage.—*Watertown Register.*

We have watched the course of this publication with some solicitude; for we felt convinced that the field was so wide, which the work, to be advantageous, should occupy, that it would need more than ordinary good common sense, tact, ingenuity, and industry, in its conductor, to fill up the chasm which the absence of a work of this nature, purely, had left in this mechanical country. Enthusiastic bigots, the cells of whose brains were filled with cob-webs, have been looking for the philosopher's stone from their own preparations in earthen crucibles. Enveloped in mist, their spectacles never allowed them to discover that the true STONE was the *type* and *press* of a printing office in the hands of a sensible tactician, who delves among the precious lore which the varied mind of man is continually displaying to his gaze, plucking the heart out of every book, sucking the sweets from every fugitive sheet, and, forming from the varied mass an intellectual treat, which, if it does not gratify the taste of Cræsus, would command the attention of Solomon, Archimedes, and Newton.

We say unhesitatingly that the New-York Mechanics' Magazine has greatly improved in matter and appearance, since this year commenced. The number now before us would sufficiently bear us out in all we might say as to the discrimination, industry, and intelligence of Mr. KNIGHT, its editor.—*Old Countryman.*

We have several times given our exalted opinion of this monthly periodical, and have done so in great sincerity, with an ardent desire that our friends might avail themselves of its usefulness by becoming subscribers. There is that intrinsic merit in the work itself which sufficiently justifies all that can be said of it, as containing a collection of the most useful and practical information on every subject interesting to the industrious man, be he of whatever denomination he may.—*Mercantile & Advocate.*

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A glance over its pages will convince any person of the great utility of such a work. Its contents are varied—almost every subject in the range of mechanism is touched upon—and its reduced price, three dollars per annum, places a system of modern architecture within the reach of nearly every person.—*Hillsborough Gazette.*

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Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

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Tro N. Y. July, 1831.

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J23 1am H. BURDEN.

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The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.:

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In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

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This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1832.

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☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

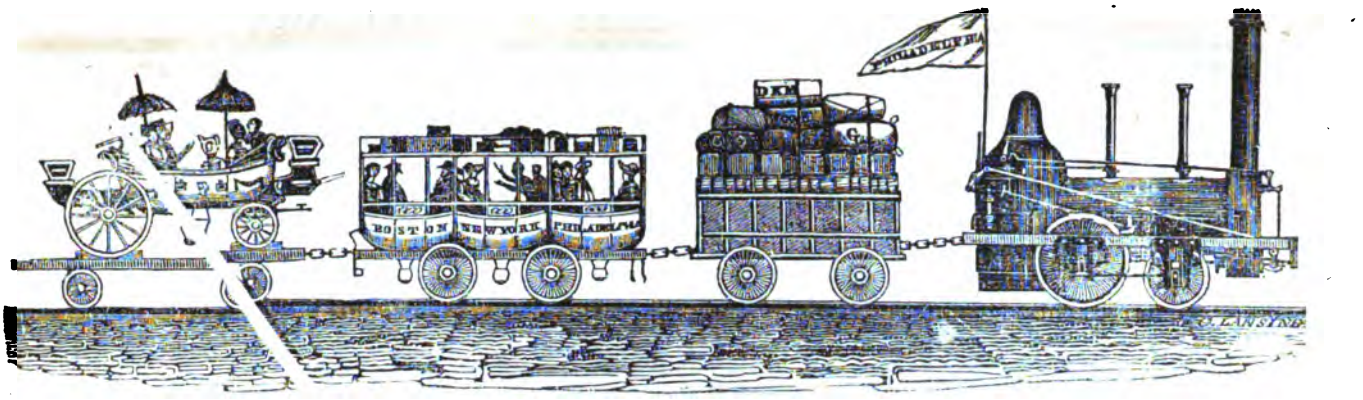
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1832.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, NOVEMBER 8, 1834. [VOLUME III.—No. 44.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 8, 1834.

We understand that upwards of 100 persons passed between Philadelphia and Trenton, on Monday, on the new Rail Road.

[*From the Philadelphia Gazette.*]

Philadelphia and Trenton Rail Road.—On Saturday last this road was opened, the whole distance being twenty-eight miles. It commences a short distance from Kensington, and the regular operations of cars will run daily; the first starting from Trenton at half past 7, A. M. and Morrisville at 8 with horses, the second from Trenton at 2 o'clock, P. M. and Morrisville at half past 2, with locomotive.

The first line from Philadelphia, will leave a half past 8, A. M. with locomotive, and the second line at 2 P. M. with horses.

This line is of great importance to this city, and will greatly facilitate the traveller to and from New York.

[For the New York American.]

Mr. Editor:—The following is a synopsis of several articles which appeared in the Brooklyn Star, on the subject of "the Long Island Railroad." As it is proper, at this tme, that the statements which it contains, and the views which it takes should, if true and sound, be generally known, or if untrue and illusory, that they should be contradicted and exposed, I beg you will give them publicity.

The enterprize is one of *consequence*. Whether we regard its probable revenne, or its promised local and general benefits, it is a matter of *interest*.

A chain of Railroad is in a state of forwardness, from Boston to the City of Washington, with the exception of one link, which is to be supplied by the proposed work, or by a Railway from Stonington to New York, on the main, of 150 miles in length, at a probable cost of $60,000,000, and which chain must finally extend from our Eastern to our Southern and Western borders!

Local attention has been drawn to this important link; and the public attention must be drawn to, and brought to bear on it, from the actual *necessity* of the case. Of the vast *utility* of this work, either in a National or local sense, nothing further need be said, unless it be to request a due inspection of accurate maps and charts of the coast and waters, to satisfy every man. I shall therefore proceed to another branch of the subject.

Of the probable *cost* of this improvement, with the requisite outfit, it may be proper to state here, that it will not exceed the capital of $1,500,000, named in the charter, *which is a very good one*. And the following data will enable every one to form a speculative opinion of its income, *for himself*, viz:

Annual amount paid for the conveyance of passengers between Newport, Providence, and New York, at $6 per passenger, is about $475,000. Reducing the charges from $6 to $3, it would be	237,000
Annual sum paid for the carriage of passengers by steamboats, between Stonington, Norwich, New London, the various towns on the Connecticut River, and New York, is about	260,000
Annual amount paid for the conveyance of passengers, each way, on Long Island, is about	58,000
Annual sum paid for the transportation of produce and merchandize, each way, on the Island, is about $147,000, of which at least half would be carried as now,	73,000
Annual amount paid for the freight of light goods, between the towns on the main, above named, and New York, *unknown!*—nominally, I will compute it at the sum of $20,000, half of which would be	10,000
	$638,000

The present population of Long Island is about 90,000; and the present assessed value of its real estate, is about 22,000,000 of dollars.

The distance from New-York to Boston, by this route, would be within 208 miles; to Stonington, within 123; to Saybrook, within 103; to Oyster Pond Point, within 102; and to Greenport, within 94 miles.

The last named place is one of the deepest, safest and *best* harbors in America; at all times easy of access and departure; and it is contemplated *this* point will form the eastern depot and termination of the road.

The width of Long Island Sound opposite Rocco Point, 2 miles west of Greenport, is less than 10 miles. Between Stonington and Oyster-Pond Point, the distance is not less than 24, nor more than 28 miles. Greenport is *west* of the mouth of Connecticut River about 5 miles.

By the proposed line, passengers and light goods can be sent from New York to Boston *within* 12 hours! to Stonington *within* 7 1-2; to Saybrook *within* 6 1-2; and to Greenport *within* 5 1-2 hours.

It is thought, by some persons, that the *revenue* of this railway promises to be larger, rateably to its cost, than that of any work of the kind, for which a charter has yet been obtained in the United States. Without admitting, or controverting this point, I shall close this article with a few statistics and facts, accessible to the knowledge of every man who may be disposed to *examine* the subject, which will aid the public in forming a *correct* opinion.

"The Boston & Providence Railroad," when completed, with double track, is to cost $30,000 per mile.

"The Stonington Railroad," when finished, with double track, it is computed, will cost $26,000 per mile.

"The Camden & Amboy Railroad," when perfected, with double track, will cost $36,000 per mile.—And this work, by its charter, is obliged to pay the State of New Jersey $30,000 *yearly;* to compete, as relates to merchandize and produce, with a Canal of *deep cut*, connecting the rivers Delaware and Raritan, which cost $2,500,000, or pay an interest on the capital invested therein, as the case may be; and may have to compete with the New Jersey and the Philadelphia and Trenton Railroads.

"The Mohawk & Hudson Railway" has cost $90,000, and bids fair to cost $100,000 per mile, *before it is got* quite right.

On some of these works there are *ascents* of from 20 to 37 feet in the mile!

"The Long Island Railroad," when finished, with double track, with no ascents on it worth naming, will cost, independently of outfit, about $13,000 per mile.

By these statements, it will appear, the last named work will cost less than half, to the mile, of what the others, *averaged*, are to cost!

On this fact, the friends of the latter confidently *rely*.

Supposing a passenger is to start from New York to Boston, via Long Island and Stonington; that he is to pay three cents per mile for his transit; would not the profit of his conveyance be *twice* as great to the Road costing $15,000, as to the one costing $30,000 per mile? Unless it is to be supposed the land owner, the capitalist, and the public at large cannot see, or cannot appreciate the case under examination, then will the wanting link in the grand chain of Atlantic frontier Railroad be speedily forged, with immense benefit to New York, Long Island and the nation, and with great profit to the proprietors.

Respectfully, your obedient servant, W.

New York, 31*st Oct.*, 1834.

Weeds and Loose Stones in Highways.—Very few of our readers, we presume, know that the following is in the Revised Statutes of this State.

"It shall be the duty of overseers of highways in each town, to cause the Noxious Weeds, on each side of the highway within their respective district, to be cut down or destroyed twice in each year,—once before the first day of July, and again before the first day of September; and the requisite labor shall be considerd highway work.

"It shall be the further duty of the overseers of highways, once in every month from the first of April until the first day of December, to cause all the Loose Stones lying on the beaten track of every road within their respective districts to be removed; and to cause the monuments erected, or to be erected, as the boundaries of highways, to be kept up and renewed, so that the extent of such roads may be publicly known."

COLUMBIA RAILROAD, S. C.

Report of A. A. Dexter and C. E. Detmold, Civil Engineers, to the Committee on the Preliminary Survey of the Upper Route of the Columbia Railroad—September, 1834.

To Messrs. Hart, Blanding, Clark, Boatwright, Ewart, and and Wallace, Committee of the Railroad Company.

GENTLEMEN,—Agreeably to the arrangement made with you on the 11th day of July, we proceeded to an examination of the route for a Railroad between Columbia and Branchville, and having completed the same, now have the honor to submit to you, with the accompanying maps and profiles, the following report:

Our examinations commenced on the south side of the Congaree Bridge, and the first bench mark, being the base, or zero, of the profiles and vertical measurements, is on the west wing wall of the abutment.

We conceive it practicable to carry the road across the river, on the superstructure, over the present carriage way of the bridge, at an expense materially less than that of the construction of a new viaduct. As the engines would of course remain on the south side of the river, the motion of the cars, or loaded wains, conducted by horse power, on the smooth surface of the railway, and restricted to a low rate of motion, could not injuriously affect the stability of the fabric, strengthened as it would be by the introduction of additional tie beams, and foundation pieces for the railroad. The noisy tumult of waters in the falls, beneath the bridge, would probably render the sound produced by the motion of cars overhead almost inaudible to horses, or other animals, passing below; at least, we should apprehend no danger or inconvenience on that account.

In case it were decided to adopt this plan of passing into town, the roof now on the bridge might be raised, and suffered to remain, with an alteration in the structure of the bracing, although perhaps in the end it would prove better economy to dispense entirely with the roof, and lay the rails upon a floored surface, zinced, or tightly caulked, like the deck of a vessel, so as effectually to protect the interior from the weather.

An objection to crossing the river on the present bridge, is the necessity, as will be seen by reference to the profile, of introduciug a grade for horse power, in overcoming the ascent from the bridge to the hill at Wingard's. The length of this grade will be 1100 feet, and will terminate in a deep excavation, where some heavy cutting will be necessary in making room for the double tracks, and other fixtures requisite at the terminating station of the locomotive road. Inasmuch, however, as horse power will be necessarily resorted to in bringing the cars across the river, a further use of this agency between the bridge and the station would not be seriously objectionable, but for the steepness of the ascent, (1 81-100 in 100,) which will make a division of the load, brought over the river, necessary at the foot of the plane.

As we expressed to you, in our communication of the 14th August, a great deal of careful examination will be necessary in determining between a crossing of the river at this point, in the manner we have mentioned, or elsewhere below, on an independent viaduct; and our examinations not having been extended to a survey of the lower crossing, we are not prepared, at present, to give an opinion on this important question.

We are inclined to believe that a considerable saving in the cost of embankment and excavation, on the route surveyed, could be effected by a location crossing the river at Granby. Our data for this opinion, however, rests on the vague basis of the general formation of the country; nothing definite can be advanced till subsequent and accurate investigations, conducted by the company, shall place the whole subject, with all its bearings, before the engineers.

Mr. M'Lane's road, already established for horse power, offers the means of transit for goods from the north side of the river to the upper part of the town, superceding the necessity of any examinations, on our part, of the profile of this side of the valley of the Congaree. At some future day, should the exigencies of business require it, an inclined plane, with stationary power, could be advantageously established, between the river and the main street, and in case of an extension of the road northwardly, the impossibility of using locomotive power on this part of Mr. M'Lane's road may render such an improvement necessary.

From about half a mile beyond Wingard's, a straight line may be attained to Congaree Creek, which may perhaps be crossed most advantageously above the confluence, with Six Mile creek, although sufficiently near the junction to avoid the high ground between the two, extending to within half a mile of the fork of the creeks. The line will of course pass on the north side of the creek, to the east of the ridge on which Taylor's negro houses are situated.

An altitude of about 18 feet will be necessary in crossing the bed of the creeks, in order to diminish the steepness of the ascents, and to save expensive excavation, which will also afford a secure elevation above the high freshets which at times prevail.

The bed of the creek is twenty-six and a half feet below our base. Crossing the creek we encounter the low ridge which divides it from the swamp contiguous. This swamp, however, is above overflow, the general height being about 14 feet below base. Leaving the swamp, which, where crossed by the survey, is about half a mile in width, the difficulty of rising out of the deep valley of the Congaree presents itself; a difficulty which, involving the possible necessity of an inclined plane, was of no ordinary character, and demanded unusual attention in the examinations.

The dividing ridge between the Edisto and Congaree rivers, we ascertained to be about 400 feet above the bed of the latter stream. Owing to the various streams which put into the Congaree river, such as the Congaree creek, Thom's creek, Savannah hunt, &c., we find the valley on this side very irregular in extent, diminishing somewhat between the creeks, and widening as the several vallies of the tributaries merge into the general depression. Not aware of the great altitude of the ridge, and hoping an ascent for locomotive power might be obtained, by bearing up on the side of the valley, as it falls off towards the river, and into Thom's creek, we pursued our line, passing out of the Congaree creek swamp on a low spur or ridge of pine land, at Dr. Taylor's; thence, in a very circuitous course, continually ascending, passing near Mr. Butler's and Mr. Hogabook's, crossing the Edisto road, and leaving it to the left, subsequently re-crossing the same, and leaving it with Jones's road, at about half a mile south of the fork, on the right, and, finally, attaining an altitude of 380 feet above the Congaree creek swamp, in a distance of only 9 miles; upwards of 250 feet of which is to be overcome in the first five miles.

Not only does the steepness and length of the ascent, which would for the first five miles, even with 52 feet cutting, rise at the rate of 1 in 100 or 52 8-10 feet per mile, render this route impracticable, but the absolute necessity of frequent curves, of short radius, in following the irregular conformation of the valley, entirely forbids a location in this direction.

Our attention was next directed to a route keeping entirely in the valley of Thom's creek, and following up the same, along the bed of the stream, crossing the creek immediately above Mr. Herman Geiger's mill pond, and passing on a ridge forming a plane of remarkably uniform rise, and apparently favorable between the main creek and a branch of the same, leaving the breaks of Savannah hunt a little to to the left, and reaching an elevation of 252 feet at J. Sitilus's. This route is favorable in direction, but is not practicable for locomotive power; the rise in the first two miles from the crossing of Thom's creek is 216 feet.

At the head of the valley of Wm. Geiger's creek, (a branch of Congaree creek,) the ground rises abruptly. There is no possibility of selecting a passage for locomotive power in this direction.

The result of our examinations leads us decidedly to the opinion that an inclined plane, with stationary power, affords the only practicable means of overcoming the ascent from the valley of the Congaree.

A favorable route for the plane may be readily selected in the valley of Thom's creek.

The ground is well adapted to the purpose at the head of the valley of the main creek; the ground abruptly putting up in a basin-like form with great uniformity of ascent. It will, of course, be desirable to accumulate as much of the rise in the plane as may be practicable, in order to allow a favorable graduation for locomotive power in overcoming the remainder of the elevation.

We have laid down upon the profile a graduation for stationary power, of one in seventeen, for 3237 feet, overcoming a rise of 190 40-100 feet, and leaving a grade of 30 feet in a mile for some distance above and below the plane.

The length of the inclined plane on the Charleston road is 3,800 feet, comprising an elevation of 182 feet, with a descent of 1 in 150, or 36 feet in a mile, for a distance of two and a fourth miles from the foot of the plane.

In future explorations, conducted with view to a final location, it would be well that a thorough examination be made of the head valley of Wm. Geiger's Mill Creek, which, from its greater length, and abrupt declivity from the very summit of the ridge, may possibly afford even a more favorable position for an inclined plane than that of Thom's creek.

The advantage of an abundance of timber and mills convenient will tend greatly to facilitate the construction and lessen the cost of the plane.

Although, as occasioning an interruption in the line of locomotive transportation, an inclined plane is to be avoided, if possible, yet, the delay and expense attending its operation, where all the fixtures are complete, and the mode of operation properly systematized, are far less than would be supposed, especially from a partial observation of the plane on the Charleston and Hamburgh road, which, put in operation before it was finished, is not yet fully completed, in every particular. A number of hands employed in filling in the road, construction of work-shops, &c., are supposed by passing observers to be attached to the plane, although but temporarily employed, and in no wise connected with the operations of the machinery.

It is well known that two eminent engineers, Messrs. Rastrick and Walher, recommended the adoption of stationary power on the whole line of the Liverpool and Manchester railway, in preference to locomotive engines, as subsequently adopted. Messrs. R. and W. estimated the saving in expense of transportation, by using stationary, instead of locomotive power, at about thirty-four per cent of the cost, and at 30 per cent of the amount. In the rival statements of Messrs. Locke and Stephenson, made after the successful application of locomotive power to the road, the saving in favor of locomotive power, in the cost of transportation, is placed at 42 per cent. and that of the annual expense at 39 per cent. These estimates made for the whole line, employing uninterruptedly the same kind of power, are not strictly applicable to an insulated instance of

an inclined plane, on a locomotive road, but yet we think, as formed from actual comparative performance of stationary and locomotive engines, upon roads where both kinds of power were used, these estimates are entitled to consideration. Even in the most unfavorable light, they place the cost of transportation with stationary power at only 269-1000 of a *penny per ton per mile*; say it should *even be four cents* per ton per mile in this case. By the chartered rates, the price is seven cents and seven mills per ton per mile, so that a handsome profit should be left to the proprietors. Mr. Stephens, the managing engineer of the stationary engine of the Charleston road, has politely assisted us in obtaining some minute practical information regarding the amount of goods which can be transported over the plane in a given time, with the actual daily cost attending its operation.

We find that working constantly twelve hours, the engine could pass over the plane, of freight both ways 552 tons, say, of cotton, going only one way, 1728 bales, the amount of all expenses of the engine and plane, including allowance for wear and tear of machinery, is $15 96 per diem, being at the rate of $3,46-100 per ton per mile. One of the highest estimates we have seen of the cost of transportation by stationary power, is that of Benjamin Wright, Esq., made from the actual performance of work on the railroad of the Hudson and Delaware Canal Company, which, on a length of sixteen miles, has five steam stationary engines, and three long self-acting planes. He estimated the cost per ton per mile to be from 3¼ to 3½ cents; but, it is admitted that there was a want of economy in the management of the work.

We have dwelt thus long upon the subject of stationary power, in the endeavor to place it fairly before you, and will conclude by reiterating the observation expressed in our letter of the 14th instant, that, "we are fully convinced, when the prospects of trade and travel will warrant the construction of a road of this extent, the intervention of a single inclined plane should offer no impediment to the prosecution, and cannot affect the final success of the enterprize."

It is a fact not generally considered, that there is not a single railroad of any extent in Great Britain, and but few in this country, which operate entirely without the aid of stationary power.

At the Baptist Meeting house, near Mr. Pool's, is the summit height of the profile—the elevation being 364 feet above base, and, as we ascertained from the height of the road at Branchville, 511 feet above tide water at Charleston. This point, nine miles from the Congaree creek swamp, at Dr. Taylor's, is situated on a narrow ridge, from which the ground falls abruptly on the right and left of the line, and more easily in the direction of the survey; the deep breaks of Savannah Hunt and Sandy Run, forming the depression on one side, and of Wm. Geiger's Mill Creek and Big Bull Swamp on the other.

Over this point the line must necessarily pass, and from the altitude here attained, which is 69 feet in a distance of two miles and one-third from the head of the plane, as well as from the broken face of the profile, consequent upon the crossing of various depressions, this part of the route will be unusually expensive in graduation, with a rise of twenty-six feet in the mile for a part of the distance.

The deepest cutting will be about feet, but the soil generally a light sand, and with the appearance of continuing thus for fifteen or twenty feet, which we understand to be the fact, from the wells dug in the country.

From this point, our profile, as we proceed on the dividing Ridge, between the heads of Bull Swamp and Sandy Run, assumes a more even and favorable appearance. As the plantation of Capt. Wm. Taylor, about two miles from the Meeting House, occupies the whole breadth of the Ridge, our line naturally seeks a passage on the high ground directly through it, and near the barn which stands at the head of a large break of Sandy Run. In compliance with a request of Capt. Taylor, not to pass with the survey through his cultivated land, which could not be done without injury to the crop, (a consideration which induced us in several instances to take a circuitous route to avoid planted grounds,) we passed along the fence, to the right of the plantation, thereby considerably diminishing the favorableness of the profile, and adding much to the length of the line, and irregularity of direction. From Capt. Taylor's to Mr. Williams's, situated on the narrow dividing ridge between Little Bull Swamp and Big Beaver Creek, the line passes over a fair country, and continues uninterruptedly favorable, with few exceptions, of inconsiderable depressions, passing near and to the right of Mr. Hildebrand's, and to the left of Mr. Hook's field, to the old Kennely road, which we strike about one mile below Mr. Hook's.

The line subsequently follows nearly in the general course of the road, on the dividing ridge between Limestone and Cawcaw Swamps, crossing the latter at Jamieson & Glover's mill dam, three miles from Orangeburg.

From the head of the plane to the descent into the Cawcaw, embracing a distance of about twenty-five miles and a half, there will be no rise in the graduation to exceed one in two hundred, or twenty-six feet in the mile.

Occasional excavations, (in a light soil,) of from ten to twenty feet, and some high work, or embankment, of an equal altitude, will be necessary. The ridge, although it preserves its general height with some uniformity of elevation, is, nevertheless, occasionally depressed, and broken by the head breaks of lateral tributaries to the streams between which it is situated, and the alignment of the road will necessarily present frequent curvatures, although of large radii.

The whole of this route is supplied with an abundance of excellent timber, at present from its general remoteness to established mills, of little or no value to its possessors. Should the same liberal spirit of gratuitous dispensation which prevailed on the line of the Charleston road, actuate the proprietors on this route, we may expect a material saving to the company.

The natural descent from the ridge into the Cawcaw is long and rapid, being for two miles at the rate of forty-eight feet to the mile. In order to reduce the natural profile to a grade favorable for locomotive power, some heavy excavation must be encountered on the summit of the ridge, and elevated work, probably to the height of twenty-five feet, will be necessary in crossing the Cawcaw.

Long and careful examination at this point can alone determine the most favorable crossing of this depression,—and the location must be made, less with a reference to a narrow and advantageous formation of the swamp, than to a long and easy descent from the ridge, whereby a saving in expensive excavation and high work may be effected.

Whether the final examinations may fix the location at a point near to, or below the present bridge on the Bull Swamp road, we cannot now determine; but, owing to the formation on the opposite side, we think it will be necessary to cross the stream as low at least as the bridge, in order to maintain a favorable direction and profile in the subsequent course, which, in order to avoid the elevated bridge on which Orangeburg is situated, should leave the village to the left, and pass on the side of the hill, in the cultivated grounds, towards the river. We do not wish to be understood as pronouncing a route leaving the village to the right impracticable. A sharp rise of thirty-five feet to the mile, with not more than thirty feet excavation, would enable us to accomplish the route in that direction, but we give the preference to an increased distance with a mor easy profile.

The village of Orangeburg is 89 94-100 feet above base, and 57 58-100 feet above Glover's and Jamieson's mill dam, on the Cawcaw. To pass directly through the village, though feasible, would occasion, in addition to the increased expense of graduation, a depth of cutting in the streets incompatible with the convenience of the citizens, in the passage of ordinary conveyances, rendered the more objectionable from the proximity in passing of the locomotive engines.

By reference to the profile, the of the country may be seen from Orangeburg to Branchville, along the river road, on which our survey was conducted, with a view to avoiding a passage through occasionally cultivated lands, and the thick woods, and bays, which would have greatly prolonged our field labors, in an unhealthy season, and having been of but little or no advantage in forming the estimates, or determining the probable location.

Undoubtedly, the route leaving Orangeburg to the left should cross the River road, and pass into the pine land, back to the River land plantations, where the uncommon evenness of surface and the abundance of timber give this part of the line peculiar advantages, not surpassed by the same extent of country on any part of the Charleston road.

The line may terminate directly at the company's depot in Branchville, and connect, by means of a curve of ample radius, with the turn out, or side track, already established,—or a new lateral road may be constructed, at the intersection of the branch, exclusively appropriated to the cars from Columbia.

The height of the surface of the railway at Branchville is 134 feet above tide water at Charleston, and 13 1-100 feet below the top of the wing wall of the Congaree Bridge; consequently, the latter point is 147 feet above tide water at Charleston,—and the summit of the ridge passed over by the survey, at Mr. Pool's, 511 feet above tide.

On the profile, which for a great part of the distance presents a fair average of the face of the country, will be found a line of graduation. Where partial changes on the aspect of the profile may be expected to ensue from future and thorough examinations in the establishing of the final location, we have indicated the same by remarks and lines, shaded blue, on the profiles; and in our estimates, which are based on the line of graduation there established, we have made due allowances for them.

Before proceeding to estimate the probable cost of this work, it is proper to furnish our opinion regarding the plan of construction which a wise economy would recommend.

The plan of pile construction, as adopted on the Charleston road, taking into view the peculiar character of the country, and the limited resources of the company, was not only judiciously applied, and well adapted to the purpose, but was indeed the *only one which could have succeeded* at the time, as there was not, at that early period in the history of railroads, sufficient confidence in the community regarding such enterprizes, to have allowed the adoption of a more expensive plan of construction, with the least probability of success. The advantage gained by the company is this, that now, having, by the completion and full success of their great enterprise, established their work in the solid and permanent estimation of the public, they are enabled, without a useless expenditure in the original plan, to furnish from the Revenues of the road the means of its perfection.

Now that the superiority of railroads over every other means of transportation is generally acknowledged, and their advantages well understood, and every where appreciated, and daily evidences given of their gaining favor in the confidence of the community, it becomes us, in deciding upon a plan of construction, to

be governed by other considerations than those of a saving in the first cost, when there is necessarily involved, as a consequence, a large subsequent expenditure in repairs, and the more perfect adaptation of the road to the purposes of transportation.

But that which most decidedly renders the general plan of the Charleston road inexpedient for the work under consideration, is the great and marked difference in the character of the soil and country, in the two routes; in the first case, for a greater part of the distance confined to a low, flat, and occasionally inundated country, interspersed with numerous ponds, morasses, and swamps, in the treacherous depths of which an incalculable amount of earth, transported from remote distances, to form the embankments, would have been swallowed up; and in the other case, nearly throughout the line, passing over a dry and elevated region of country, with an undulating profile of the natural surface, in the necessary reductions of which earth will be afforded for the construction of the embankments.

The occasional use of the truss or bridge work in the deep depressions may be advantageously resorted to, and will afford both a substantial and economical construction, and also allow a more rapid prosecution of the work than would be practicable in the plan of earthen embankments, which, especially in loose soils, occupy much time in acquiring a solid basis and thorough stability.

(To be continued.)

NEW-YORK AND ERIE RAILROAD.—We are authorized to publish the following correspondence.

OWEGO, TIOGA Co., Oct. 14, 1834.

Hon. WM. H. SEWARD:

Sir,—The undersigned, citizens of the county of Tioga, having a deep interest in the success of the projected railroad from N. York to lake Erie through the southern tier of counties of this State, take leave to request an expression of your opinion in relation to that (to us) all-important improvement. From the situation in which you stand, as a candidate for the office of Governor of this State, an expression of your sentiments upon this subject is rendered a matter of peculiar interest to the citizens of the southern tier of counties, a section of country which has hitherto been effectually excluded from all participation in the benefits of our system of internal improvements. As citizens of that section of the State, and not as political partizans, we request an expression of your sentiments upon this subject, and we hope that our request may not be considered as intrusive or ill timed, especially as we see daily allusions in the public prints to your supposed *hostility* to this measure.

We are, Sir, very respectfully,
Your obed't serv'ts,

Eleazer Dana,	Jas. Pumpelly,
William Platt,	L. A. Burrows,
Gurdon Hewett,	Harmon Pumpelly,
Charles Pumpelly,	Wm. A. Ely,
Geo. J. Pumpelly,	George Bacon,
Robert Johnson,	Charles Talcott.

Auburn, Oct. 20th, 1834.

GENTLEMEN,—Your communication requesting the expression of my opinion in relation to the projected Railroad from Lake Erie to the Hudson River, thro' the Southern tier of counties, has been received. I cannot be surprized that you have made this application, when, as you say, you see daily allusions in the public prints to my supposed hostility to that measure. Yet, Gentlemen, you must be aware that those who are are engaged in misrepresenting my views, will equally endeavor to prevent credit being given to the sincerity of opinions expressed upon a subject of engrossing interest at such a time. Anxious as I am to correct such misrepresentations, I could not bring myself to appear in public, even for that purpose, had I not learned from sources entitled to my confidence, that the views of Gov. Marcy have been solicited and are confidently promised by his political friends to be laid before the electors. Under such circumstances, it would seem to be unjust to the generous and confiding party who have made me their candidate, to suffer the great cause which they maintain to receive injury from my silence.—You however, Gentlemen, will bear witness, that I have not sought this opportunity of appearing before the public, and that in doing so, I yield to the considerations already expressed.

It is wholly untrue that I am hostile to the projected Rail Road from Lake Erie to the Hudson River through the southern tier of counties. The vote which I gave in the Senate upon an incidental question connected with that improvement, had no reference whatever to the merits of the project itself, but was founded upon peculiar considerations growing out of the single question presented, & manner in which it came before the Senate, but in which my judgement was not in the least influenced by any unfriendly feeling to the Rail Road. On the contrary, I can freely state to you, Gentlemen, that I am and ever have been the advocate of the system of internal improvements by means of Rail Roads and Canals: that I regard it as one of the most important duties of the Government as fast as its developing resources will allow, to prosecute such a system of improvements of that description as will enable all the different sections of the country to enjoy, equally as possible, the advantages of a speedy communication with the great commercial metropolis of the State. I cannot doubt that the increased wealth and ability of the state, improved by a revision of the entire administration of the canal revenues, would allow us to resume and push to a successful completion this eminently important system. Among those improvements which are most indispensable to the great object of securing to this State the precious boon of the trade of the western States I have long believed one of the most desirable, is a work which would connect Lake Erie with the Hudson River, passing through the Southern tier of Counties, *and which would give to the city of New York the advantages of the great Western trade at all seasons of the year, and particularly at those seasons of the year, when, without such a work, that trade must flow through different channels to a Southern port.* To secure this trade was the great object of the system of internal improvements, projected and commenced by that distinguished public benefactor Dewitt Clinton. Experience has shown that this object has not been entirely accomplished, and I have no belief that it will be, until the improvement mentioned by you, together with others of a similar character in other sections of the State, shall be completed. It is certainly a consideration of much weight, that the suggested Railroad will bestow upon the Southern counties through which it will pass, advantages similar to those enjoyed by other parts of the State, where similar public improvements have been accomplished. That it is practicable, I am happy to learn, will be satisfactorily established by the surveys recently made under the direction of that experienced engineer Judge Wright.

With these opinions in its favor, you may be assured of my readiness, either as a private citizen or in whatever public capacity I may be called to serve, to afford every aid in my power, not only to the construction of this work, but to the completion of that comprehensive and beneficial system of internal improvements, commenced as I have already mentioned, and thus far continued with a success which has astonished ourselves.

I am, gentlemen, with the greatest respect, your fellow citizen, W. H. SEWARD.

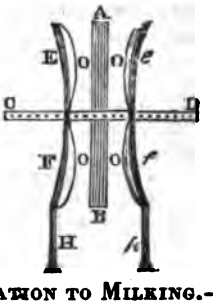
Messrs. Eleazer Dana	Ja's Pumpelly
William Platt	Latham A. Burrows
Gurdon Hewitt	Harmon Pumpelly
Cha's Pumpelly	William A. Ely
Geo. J. Pumpelly	Geo. Bacon
Robert Johnson	Charles Talcott.

Application of the Principle of a Balance.

[From the American Journal of Science and Arts.]

The principle of a balance is a powerful one when ingeniously and judiciously applied to mechanics and the arts. Its applicability is universal. There are few if any machines now in operation that are not dependent upon this principle, or to which it cannot be beneficially applied. Look at the numerous machines employed in the various manufactories of Europe and America: how diversified, how multiplied, and how complex their operations; what a consumption of power is required to work or move them; what expense is incurred, and how great is their performance; nevertheless, how few are the parts, and simple the motions, absolutely necessary to answer, if not overrun, this performance. Indeed, what cannot man do on the principle of a balance, and what can he do without it. With it, with liberty to exert his power, he might displace the world; and without it, how limited would be his influence in mechanics and the arts, and how small his accessions of power and profit derived from that source. I conclude my premises (as effects balance causes, and causes effects,) by suggesting that some of the greatest discoveries yet to be developed to the world may, in all probability, be founded on the powerful and universal principle of a balance, which pervades not only mechanics and arts, but every part of the universe

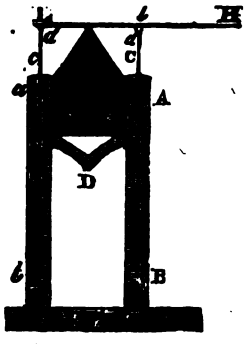
Fig. 1.



1. APPLICATION TO MILKING.—Fig. 1 represents a machine for milking. A B represent a light block, five inches long, three wide, and an inch and a half thick. C D represent a ruler-like piece of wood, or metal, five inches long, one third of an inch thick, and two thirds wide, perforated with holes at every sixth of an inch from end to end. This piece, C D, is to be firmly inserted, and fastened at right angles in the middle of the block A B. E F, *e f*, represent two similar, strong, light, thin boards, a little curved from their centre, each five inches long, three wide, and half or two thirds of an inch thick. H *h* represent the handles, which can be formed in connection with the boards, or attached separate. The boards are to have each one mortise, cut through its middle, of a sufficient size for the easy and regular motion of the ruler-like piece C D. Holes are to be made at right angles through the centre of each of these mortises, corresponding with those in the piece C D, so that by means of small pins or screws, these boards, E F, *e f*, can be moveably hung nearer or farther from the block A B, as required. o o o o, represent the spaces between the block A B, and boards E F, *e f*, which the teats are to occupy to be milked. The sides of the block A B, and the inner sides of the boards E F, *e f*, are to be lined with leather, or some other soft substance, stuffed with cotton, &c. so as to be elastic and press easy against the teats and not injure them. This lining should be harder, and project farther, the nearer it comes to the upper sides of these boards and blocks; so that when the pressure is given, it will commence at the upper parts of the teats and gradually increase downwards, till all the milk is forced out. Instead of this stuffed lining, springs, spiral wires, or some other elastic substance, may be used; perhaps springs are best. To work this machine, it is to be supported by the hands by means of the handles H *h*, in such a position that the teats will hang down between the block and the boards at o o o o, two teats each side of the piece C D. Both handles are to be moved inwards and then outwards, either fast or slow, so that the operation of

milking can be performed or regulated at pleasure. When the handles are moved inwards, the two nearest teats to the milker will be milked; when moved outwards, the two farthest; and thus, as the motions can be so quick, there will almost flow four streams, till the operation is performed. Instead of communicating the pressure on the outside, it may be applied on the inside by altering the construction a little. This machine is applicable to other purposes allied to the operation of milking. The construction, dimensions, weight, and quality of the materials are variable, but the principle of operation is the same.*

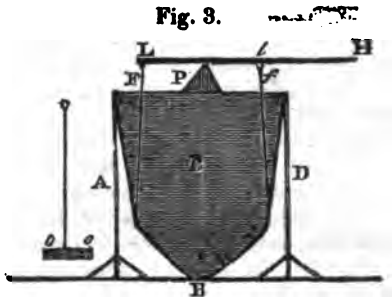
Fig. 2.



2. Application to Pumping.—Fig. 2 represents a balance suction or forcing pump, for water or air, wherein there is no loss of motion. W represents a body of air or water. A B, *a b*, represent two similar hollow cylinders, whose lower ends are inserted perpendicularly, equidistant, and parallel in the body W of air or water. P represents a pivot, which firmly connects the top of the cylinders, and across which the balancing lever L *l* is to be moveably hung and poised. H represents the handle of the lever L *l*. C *c* represent two similar piston rods, whose upper ends are moveably hung to the lever at *d d*, and to whose lower ends are attached either pistons or valves, as it is designed for a suction or forcing pump. D represents the pipes of both cylinders, united to convey off the air or water. It can be conveyed off separately. This is operated by an upward and downward motion of the handle H. Any equal number of pumps, either suction or forcing, of equal dimensions, can, by being connected on this principle of a balance, be worked or moved by one handle. This application is susceptible of numerous modifications.

3. Application to Churning.—Fig. 2 will serve to illustrate its application to churning. A, B, *a b*, represent two churns; C *c*, their dashers or piston-rods; L *l*, the balancing lever; H, its handle; P, its pivot, which connects them the same as the cylinder A B, *a b*. It is worked by an upward and downward motion of the handle H. This construction may be modified into a forcing or piston churn, by having a communication at the bottom between them, to force the cream alternately from one into the other. Instead of two churns, one churn resembling those commonly wrought by a crank, with a piston through the middle, and an aperture through that, would answer the purpose. I am of the opinion, that, in churning, the cream would gather sooner, and form butter, by being powerfully forced alternately through small apertures, than by any other means, unless it be by adding some substance or composition that will immediately fetch it. Instead of the cream's being forced from one churn into the other and backwards, constantly, a small wheel full of holes, (the lids of the churns being made tight and fast,) might be attached to the lower end of each piston-rod or dasher, and made to operate up and down, and answer the same purpose, or a better than the former method.

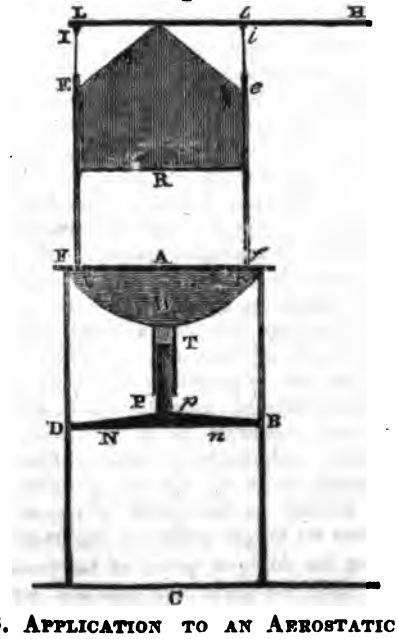
Fig. 3.



4. Application to Washing.—Fig. 3 represents a washing machine. C represents the cistern, which can be lined with rollers on the two sides A D, to hold the water and the clothes to be washed; three feet high and three wide; A B D, its frame; P, the pivot; L *l*, the balance lever; H, its handle; F *f*, the rods on which the washers, beaters, or rollers, are hung; *o o* represent a beater, &c. attached to its rod F or *f*. This machine is operated by the upward and downward motion of the handle H, and can be variously modified.

5. Application to Fulling.—Fig. 3 will serve to illustrate its application to a fulling-mill or machine. There are two constructions to this application: a vertical and horizontal. Fig. 3 enlarged will represent the vertical one. The horizontal one is nearly the same as the vertical, only that the lever and rods have a horizontal motion, and the cistern must be modified a little to answer it. In both constructions the operating power is to be applied to the handle H.

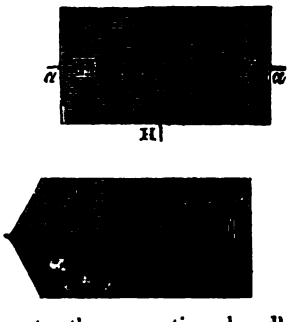
Fig. 4.



6. Application to an Aerostatic or Hydrostatic Press.—Fig. 4 represents an aerostatic or air, or a hydrostatic or water press: A B C D, its frame; W, the air or water cistern, which in shape resembles the segment of a hollow sphere or hemisphere; T, a strong hollow cylinder inserted in or attached to the bottom of the cistern; N *n*, the follower, a strong bar, fitted to move up and down in the sides D B of the frame. To this follower is attached the piston P *p*, which is exactly fitted to move up and down in the cylinder T, so as to prevent the escape of air or water. The pressure of this press is given between the follower N *n*, and the side of the frame C. E F, *e f*, represent two hollow pipes, whose lower ends are tightly inserted into the cistern W. V *v*, two valves that exactly cover the lower ends of these pipes, and open sufficiently into the cistern. R, the pivot of the operating lever, which connects the top of the pipes; L *l*, the operating lever; H, its handle; I *i*, two rods that move up and down in the pipes, whose upper ends are moveably hung to the lever L *l*, and to whose lower ends are attached wheels or pistons with valves in their centre, opening downwards, exactly fitted to move up and down, and not allow the escape of air or water. To give the pressure either by air or water, it is admitted into the top of the pipes, passes through the valves in the wheels and the valves V *v*, until the cistern is full; the handle H is then to be worked, and the water or air will force down the piston P *p*, and consequently the follower N *n*, and press whatever is between it and C. To take off the pressure, the air or water can be let out of the cistern. Pistons might be used in the pipes. This press is susceptible of numerous modifications and applications.

7. Application to Printing.—Fig. 5 represents a printing machine. A represents an oblong table or frame, set full of types, and balanced on its axle E *e*, which supports it at *a a*, moveably in two upright standards.

Fig. 5.



H represents the operating handle; M, a heavy or solid, oblong, triangular block, as wide and long as the table, over which it is to be firmly hung, so that one of its angles will run parallel and laterally with its axle E *e*. The two sides of the block M, immediately over the types or against which they will press, when the handle H is operated, must be lined with some elastic substance, in order to give a good impression. The types are to be inked by inking rollers, and the paper applied by hand or machinery. Instead of the table being moveably hung, and the block fixed, it may be reversed: the table fixed and block moveably hung. Instead of the block being triangular, and table flat, the block may be flat, and the table triangular. Every motion of the handle H, either upwards or downwards, will give an impression.

H. Strait.

East Nassau, Rensselaer co., N. Y., April 28, 1834.

* Having stated to the author some doubts as to this new process of milking, we have received his assurance that he has proved it practically, and that he desires its publication.—[Ed.]

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 680.)

We are told that we must not drink at meals, lest the fluid interfere with the operation of digestion; and of this there need be no apprehension. The stomach separates and lets off with the most curious skill all superfluous fluid through its orifice, while it retains the matter fit for digestion. It retains it in its left extremity, permitting the fluid to pass into the intestines, there to supply the other wants of the system no less important than the digestion. The veterinary professor, Coleman, ascertained that a pail of water passed through the stomach and intestines of a horse at the rate of ten feet in the minute, until it reached the cæcum. Drinking at a stated period after meals, say an hour, is at variance with both appetite and reason. The digestion is then effectually interfered with; for what was solid has become a fluid, (the *chyme.*) This fluid is already in part assimilated; it has undergone the first of those changes which fit it ultimately to be the living blood; and the drink mixing with this chyme in the inferior extremity of the stomach, or first intestine, must produce disturbance, and interrupt the work of assimilation.

Looking in this manner upon the very extraordinary properties of the stomach, we perceive how natural it was for physicians to give a name to the sensibility of which we have been speaking. The *Archeus* of Vanhelmont, the *Anima* of Stahl, were the terms used to designate this nature, principle, or faculty, subordinate to and distinct from perception; a notion entertained, and more or less distinctly hinted at, by philosophers from Pythagoras to John Hunter.

A modern philosopher,* of whom, in this instance, it would be difficult to say whether he be serious or playful, with some plausibility, however, asserts that it might be possible to carry on the business of life without pain. If animals can be free from it an hour, they might enjoy a perpetual exemption from it. Animals might be constantly in a state of enjoyment; instead of pain, they might feel a diminution of pleasure, and might thus be prompted to seek that which is necessary to their existence.

In the lower creatures, governed by instinct, there may be, for aught we know, some such condition of existence. But the complexity and delicacy of the human frame is necessary for sustaining those powers or attributes which are in correspondence with superior intelligence; since they are not in relation to the mind alone, but intermediate between it and the external material world. Grant that vision is necessary to the developement of thought, the organ of it must be formed with relation to light. Speech, so necessary to the developement of the reasoning faculties, implies a complex and exceedingly delicate organ, to play on the atmosphere around us. It is not to the mind that the various organizations are wanted, but to its condition in relation to a material world.

The necessity of this delicate structure being admitted, it must be preserved by the modifications of sensibility, which shall either instinctively protect the parts, or rouse us into powerful and instantaneous activity. Could the eye guard itself, unless it possessed sensibility greater than the skin? Could it guard itself, unless this sensibility were in consent with an apparatus which acted as quick as thought? Could we, by the mere influence of pleasure, or by any cessation or variation of pleasurable feelings, be made alive to those injuries which might reach the lungs by substances being carried in with the air we breathe? Is there any thing but the sense which gives rise to the apprehension of suffocation, that would produce the instant and sudden effort which could guard the throat from the intrusion of what was offensive or injurious. Pleasure is at the best a poor motive to exertion, and rather induces to languor and indulgence, and at length indifference. To say that animals might be continually in a state of enjoyment, and that when urged by the necessities of nature, such as thirst, hunger, and weariness, they might only feel a diminution of pleasure, is not only to alter man's nature, but external nature also; for whilst there are earth, rocks, woods, and water, for our theatre of existence, the texture of our bodies must be exposed to injuries from which they can only be protected by a sensibility adapted to each part, and capable of rousing us to the most animated exertions. Take away pain, and take also away the material world, by which we are continually threatened with injury, and what, after all, is this but imagining a future state of existence, instead of that in which mind and matter are combined? If all were smooth in our path, if there were neither rugged places nor accidental opposition, whence should we derive those affections of our minds which we call enterprise, fortitude, and patience?

Independent of pain, which protects us more powerfully than a shield, there is inherent in us, and for a similar purpose, an innate horror of death. "And what thinkest thou, (said Socrates to Aristodemus,) of this continual love of life, this dread of dissolution, which takes possession of us from the moment that we are conscious of existence?" "I think it, (answered he,) as the means employed by the same great and wise artist, deliberately determined to preserve what he has made."

The reader will no doubt here observe the distinction. We have experience of pain from injuries, and learn to avoid them; but we can have no experience of death, and therefore the Author of our being has implanted in us an innate horror at dissolution, and we may see this principle extended through the whole of animated nature. Where it is possible to be taught by experience, we are left to profit by it, but where we can have none, feelings are engendered without it. And this is all that was necessary to show how the life is guarded: sometimes by mechanical strength, as in the skull; sometimes by acute sensation, as in the skin, and in the eye; sometimes by innate affections of the mind, as in the horror of death, which will prevail as the voice of nature, when we can no longer profit by experience.

But the highest proof of benevolence is one, that we have the chiefest source of happiness in ourselves. Every creature has pleasure in the mere exercise of his body, as well as in the languor and repose that follow exertion; but these conditions are so balanced, that we are impelled to change, and every change is an additional source of enjoyment. What is apparent in the body is true of the mind also. The great source of happiness is to be found in the exercise of talents, and perhaps the greatest of all is when the ingenuity of the mind is exercised in the dexterous employment of the hands. Idle men do not know what is meant here; but nature has implanted in us this stimulus to exertion, that she has given to the ingenious artist—the man who invents, and with his hands creates, a source of delight, perhaps greater, certainly more uninterrupted, than belongs to the possession of higher intellectual powers, and far beyond any that falls to the lot of the minion of fortune.

We believe that every thinking person may have wherewithal in his own sphere to tutor him, and bring him to the temper of mind and belief which we would inculcate. Yet there is something peculiarly appropriate in the study of our own bodies. In chemistry we are so much the agents as to forget the law, and the law itself seems at least to intermit. But in the changes wrought in the animal frame, the directing power is uniform in its influence, and holds all in harmony of action.

We now learn without difficulty and without mystery, what is meant by organic and animal sensibility. The first is that condition of the living organ which makes it sensible of an impression, on which it re-acts and performs its functions. It appears from what has preceded that this sensibility may cause the blowing of a flower, or the motion of a heart. The animal sensibility is indeed an improper term, because it would seem to imply that its opposite, organic sensibility, was not also animal; but it means that impression which is referred to the sensorium; where, (when action is excited,) perception and the effort of the will are intermediate agents between the sensation and the action or motion.

We may sum up the inquiry into sensibility and motion thus:

1. The peculiar distinction of a living animal is that its minute particles are undergoing a continual change or revolution under the influence of life. Philosophers have applied no term to these motions.

2. An organ possessed of an appropriate muscular texture, and of sensibility in accordance with the moving instrument, as the heart, or the stomach, has the power of action without reference to the mind. The term *automatic*, sometimes given to those motions, conveys a wrong idea of the source of motion, as if, instead of being a living power, it were consequent upon some elastic or mechanical property.

3. There are sensibilities bestowed on certain organs, and holding a control over a number of muscles, which combine them in action in a manner greatly resembling the influence of the mind upon the body, yet independent of the mind: as the sensibility which combines the muscles in breathing.

4. In the last instance, a large class of muscles were combined without volition. But the whole animal fabric may be so employed, as in the instinctive operations of animals, where there is an impulse to certain actions not accompanied by intelligence.

5. A motive must exist before there are voluntary actions, and hence philosophers have supposed that there can be nothing but

* Hume.

instinctive actions in a new-born child. But we must distinguish here what are perfect at first, and what are imperfect and irregular, and become perfect by use and the direction of the will. The act of swallowing is perfect from the beginning. The motions of the legs and arms, and the sounds of the voice, are irregular and weak, and imperfectly directed. It is the latter which improve with the mind. From not knowing the internal structure, and the arrangement of the nerves, philosophers, as Hartley, supposed that an instinctive motion, such as swallowing, may become a voluntary act. Volition in the act of swallowing consists merely in putting the morsel within the instinctive grasp of the fauces, when a series of involuntary actions commence, over which we have no more control in mature age than in the earliest infancy. Swallowing is not a voluntary action, and the thrusting the morsel back with the tongue is like putting the cup to the lip. It is the preparation for the act of swallowing that is voluntary, but over the act itself we have no control.

It is an error to suppose that all muscular actions are in the first instance involuntary, and that over some of them we acquire a voluntary power. The power of volition over the muscles of the body is provided for by appropriate nerves, and no apparatus which is not supplied with that particular class of nerves can ever by any exercise or study become subject to volition. A child's face has a great deal of motion in it, very diverting from its resemblance to expression, before there can be any real motive to the action. It will crow, and make strange sounds, before there is an attempt at speech. But this gradual developement of intelligence and acquisition of power ought not to be called the will attaining influence over involuntary muscles; since, in fact, the apparatus of nerves and muscles is prepared, and waits for the direction of the mind with so perfect a readiness as to fall into action and just combination, before that condition or affection of the mind which should precede the action takes place. A child smiles before any thing incongruous can enter the mind, before even pleasure can be supposed a condition of the mind. Indeed, the smile on an infant's face is first perceived in sleep.

6. All the motions enumerated above are spontaneous motions belonging to the internal economy; but the external relations of the animal, the necessity of escaping from injury, or warding off violence, require a sensibility suited to those outward impressions, and an activity consequent on volition. Nothing less than perceptions of the mind, and voluntary acts, suited to a thousand circumstances of relation, could preserve the higher classes of animals, and man above all others, from destruction.

All these provisions proceed from an arrangement of nerves and muscles. The mechanical adjustment of the muscles and tendons is perfect, according to the principles of mechanics. The muscles themselves possess a different property; they are irritable parts; motion originates in them. This living property of contraction is admirably suited, in each particular muscle, to the office it has to perform. In some it is suitable that the muscles should act as rapidly as the bowstring on the arrow; in others the action is slow and regular; in others it is irregular, and after long intervals, according as the functions to which they are subservient require. The motions of the limbs, the motions of the eye, those of the heart and arteries, stomach, and bowels, are all different. This appropriation of action is not in the muscles themselves, but as they stand in relation to the nervous system, and the sensibilities which impel them.

We hope, then, by the course we have taken, that we have carried the reader to a higher sense of the perfection of the animal structure. We first drew him to observe provisions in the strengthening of the bones. the adjustment of their extremities to the joints, the course of the tendons, and other such mechanical appliances, proving to him the existence of intention in the formation of the solid fabric of the body. We have then explained how that motion is produced which was at all times familiar to him, but even the immediate causes of which he did not comprehend. We have in the last place shown him, that under the term life he has a still more admirable subject of contemplation in the adjustment of those living properties; in the sensibilities differing not so much in degree as in kind; and in their appropriation, both to the operations of the internal economy, and to the relations external, and necessary to safety.

It is not possible to contemplate these things without having the full proof before us of the power of the Creator in forming and sustaining the animal body. As a man with *gutta serena* may turn his eyes to the sun, and feel no influence of light, so may the understanding be blind to these proofs; and we may say with the celebrated Dr. Hunter, that he who can contemplate them without enthusiasm, must labor under a dead palsy in some part of his mind, and we must pity him as unfortunate.

Mount Auburn.—We shall continue to lay before our readers intelligence on this subject, in the hope that the day is not distant when New-York city will have a suitable resting-place for the dead.

At a meeting of the Massachusetts Horticultural Society, Saturday, September 20, 1834, the Garden and Mount Auburn Cemetery Committee, by their Chairman, (Hon. Judge Story,) presented the following Report, which was read, accepted, and ordered to be printed in those of the city newspapers whose editors may be willing to insert the same.

R. T. Paine,
Recording Secretary.

The Garden and Cemetery Committee of the Massachusetts Horticultural Society beg leave to submit the following Annual Report for the consideration of the Society:

The committee congratulate the society upon the continued improvement of the garden and cemetery, and the additional favor and encouragement which the design has received from the public. Before proceeding, however, to any particulars respecting this subject, they feel it their duty to make a few remarks, in order to correct some erroneous notions, which pervade certain portions of the community, relative to the nature and objects of the establishment. It is by no means uncommon to find persons impressed with the belief, that the establishment is a private speculation, for the private benefit of the members of the society, or of the individuals who originally advanced the money to purchase the grounds for the garden and cemetery, and that considerable profits have been already realized from it. This notion is utterly unfounded. The cemetery is in the truest and noblest sense a public institution, that is, an institution of which the whole community may obtain the benefit upon easy and equal terms. No individual has any private interest in the establishment beyond what he acquires as the proprietor of a lot in the cemetery; and every man in the community may become a proprietor upon paying the usual sum fixed for the purchase of a lot. The whole grounds are held by the Horticultural Society in trust, for the purposes of a garden and cemetery; and no member thereof as such has any private interest therein, except as a corporator, or proprietor of a lot. The whole funds which have been already realized by the sale of lots have been devoted to paying the price of the original purchase, laying out the grounds, enclosing them with a fence, erecting an entrance gate and portal, and a cottage, and other structures for the accommodation of the superintendent, and defraying the incidental expenses. The expenditures have already amounted, as appears by the treasurer's report, to upwards of twenty-five thousand dollars; and the proceeds of the sales have fallen short of this amount by about two thousand dollars; so that as yet the expenditures have exceeded the income. It has always been the understanding of the Society, that all funds which should be obtained by the sale of lots, should, after defraying the annual expenses of the establishment, be applied exclusively to the preservation, repair, ornament, and permanent improvement of the garden and cemetery, and never to the private emolument of any of the members—and indeed this constituted the fundamental object of those who have become the proprietors of lots. It is due also to the gentlemen whose public spirit matured the design, to state that it was their primary object to exclude all private speculation and interests from the undertaking, and, by a wise and fixed policy, to secure all the funds which should arise from its success to public purposes of an enduring and permanent character. The Society has sanctioned these views. It was believed that a generous community would foster the design, and by a timely liberality in the purchase of lots, would enable the Society to make this beautiful retreat for the Dead at the same time the consolation and just pride of the Living. The committee have great pleasure in stating that these reasonable expectations have not been disappointed. Mount Auburn has already become a place of general resort and interest, as well to strangers as to citizens; and its shades and paths ornamented with monumental structures, of various beauty and elegance, have already given solace and tranquillizing reflections to many an afflicted heart, and awakened a deep moral sensibility in many a pious bosom. The committee look forward with increasing confidence to a steady public patronage, which shall supply all the means necessary for the accomplishment of all the interesting objects of the establishment.

Relying on this patronage, the committee indulge the hope that the period is not far distant when by the sale of the lots the Society will be enabled to enclose all the grounds with a permanent wall, to erect a temple of simple and classical character, in which the service over the dead may be performed by clergymen of every denomination: to add extensively to the beauty and productiveness of the garden; and, above all, to lay the foundation of an accumulating fund, the income of which shall be perpetually devoted to the preservation, embellishment, and improvement of the grounds. The last object the committee deem of the highest importance to the perpetuity of the establishment; and it cannot be contemplated with too much care and earnestness in all the future arrangements of the Society. In addition to these objects the committee would suggest the propriety of making arrangements for the admission of water from Fresh Pond into the ponds of the cemetery, and, after passing through them, of conducting it into Charles River. Such a measure would add to the sa-

lubrity of the ponds, as well as improve the general aspect of the whole scenery. It is believed that this measure may be accomplished at a comparatively small expense, whenever the funds of the Society will admit of a suitable appropriation. In the mean time it seems desirable to secure, by some preliminary arrangements, the ultimate success of the project.

The committee would further state, that by the report of the treasurer it appears, that the whole number of lots in the cemetery which have been already sold is 351, viz. 175 lots in 1832, 76 lots in 1833, and 100 lots in 1834; and the aggregate sum produced by these sales is $23,225.72. The whole expenditures incurred during the same years amount to $25,211.88. The balance of cash and other available funds now in the hands of the treasurer is $5,403.32. The committee are of opinion, that reliance may safely be placed upon the future sales of lots to defray the expenses of the current year; and that, therefore, a portion of the funds now on hand may be properly applied to the reduction of the remaining debts due by the Society.

The committee would further state, that since the month of August, 1833, there have been ninety-three interments at Mount Auburn; eighteen tombs have been built, sixteen monuments have been erected, and sixty-eight lots have been turfed and otherwise ornamented. It is understood that other monuments are in progress, and will be erected in a short time.

The committee would further state, that finding the grounds at Mount Auburn were visited by unusual concourses of people on Sundays, and that the injuries done to the grounds and shrubbery were far greater on those occasions than any other, from circumstances which it is unnecessary to mention, they deemed it their duty, as well in reverence for the day, as in reference to the permanent interests of the establishment, and a regard to the feelings of the community, to make a regulation prohibiting any persons, except proprietors and their families, and the persons accompanying them, from entering the grounds on Sundays. The effects of this regulation have been highly beneficial. It has not only given quiet to the neighborhood, and enabled proprietors and their families to visit their lots on Sundays under circumstances of more seclusion, tranquillity, and solemn religious feelings; but it has put a stop to many of the depredations which thoughtless and mischievous persons had been too apt to indulge in, in their recreations on that day. Several other regulations have been made, which experience has shown to be indispensable to the due security and uses of the cemetery. The most important of these is the closing the gates at sunset and opening them at sunrise. And it may be observed of all these regulations, that while they allow a free access to the grounds to all visiters at reasonable times, and in a reasonable manner, they are calculated to prevent any desecration of them under false pretexts, or by secret misconduct.

The committee would further state, that in pursuance of the vote of the society at their last annual meeting, they made application to the legislature of the commonwealth at its last session, for additional provisions to aid the general objects of the Society. The legislature accordingly passed an act, entitled "An act in further addition to an act to incorporate the Massachusetts Horticultural Society," which is entirely satisfactory to the committee. They therefore beg leave to recommend, that the Society should, by a formal vote, accept the same.

All of which is respectfully submitted.

JOSEPH STORY,
Chairman of the Committee.

The Trial of Lieutenant Babbitt closed on Thursday last, and the decision of the Court has been forwarded to Washington, whence it will be made known to the public. It has been stated in the newspapers that a sum, between five and six hundred dollars, has been raised by subscription, in order to pay the expenses incurred by Lieutenant Babbitt in defending this suit,—expenses which were large enough to deprive him of all his pay and emoluments for at least a year or two. In addition to this, we have heard that his counsel, Mr. Loring, after the trial was over, refused to receive any remuneration for his services, although he has spent considerable time in the case, and time too, which to a gentleman of his profession and business, is very valuable.—[Boston Courier.]

OFFICIAL.

ORDER No. 68. HEAD QUARTERS OF THE ARMY, ADJUTANT GENERAL'S OFFICE, *Washington, Oct. 31st*, 1834.

1....PROMOTIONS and Appointments in the Army. by THE PRESIDENT of the United States, since the publication of the "*Order*" No. 49, of July 9th, 1834.

1.—PROMOTIONS.

Regiment of Dragoons.

Brevet Second Lieutenant Lucius B. Northrop, to be Second Lieutenant, 21st July, 1834, vice McClure, deceased—(brevet 1st July, 1831.)

First Regiment of Artillery.

First Lieutenant David Van Ness, to be Captain 23d October, 1834, vice Griswold, deceased.

Second Lieutenant Richard C. Tilghman, to be First Lieutenant, 23d October, 1834, vice Van Ness promoted.

Brevet Second Lieutenant David E. Hale, to be Second Lieutenant, 23d Oct., 1834, vice Tilghman promoted—(brevet 1st July, 1833.)

Second Regiment of Artillery.

Second Lieutenant Hugh W. Mercer, to be First Lieutenant, 10th October, 1834, vice Armstrong, deceased.

Brevet Second Lieutenant Edmund Schriver, to be Second Lieutenant, 31st July, 1834, vice Allen, resigned—(brevet 1st July, 1833.)

Brevet Second Lieutenant Harrison Loughborough, to be Second Lieutenant, 10th Oct., 1834, vice Mercer, promoted—(brevet 1st July, 1834.)

Third Regiment of Artillery.

Brevet Second Lieutenant Roswell W. Lee, to be Second Lieutenant, 14th Sept., 1834, vice Brown, deceased—(brevet 1st July, 1833.)

Fourth Regiment of Artillery.

Second Lieutenant William F. Hopkins, to be First Lieutenant, 14th September, 1834, vice Canfield, appointed Assistant Topographical Engineer.

Brevet Second Lieutenant Alfred Brush, to be Second Lieutenant, 14th September, 1834, vice Hopkins, promoted—(brevet 1st July, 1832.)

Second Regiment of Infantry.

Major Alexander R. Thompson, of the 6th regiment, to be Major of the 2d Regiment; (vice Whistler, promoted:) to rank from the 4th April, 1832.

Third Regiment of Infantry.

Brevet Colonel James B. Many, Lt. Colonel of the 7th infantry, to be Colonel, 21st July, 1834, vice Leavenworth, deceased.

Seventh Regiment of Infantry.

Major William Whistler, of the 2d Infantry, to be Lieutenant Colonel, 21st July, 1834, vice Many, promoted.

2—APPOINTMENTS.

Staff.

Assistant Surgeon Edward Macomb, to be Surgeon, to take effect 1st Nov. 1834, vice Macmahon, resigned.

John S. Gatlin, to be Assistant Surgeon, 3d August, 1834, vice Welsh, deceased.

George R. Clarke, to be Assistant Surgeon, to take effect 1st November, 1834, vice Macomb, promoted.

Topographical Engineers.

Brevet Captain James D. Graham, Assistant Topographical Engineer, to be Topographical Engineer, with the brevet rank of Major, 14th September, 1834, vice Anderson, deceased.

First Lieutenant Augustus Canfield, late of the 4th Regiment of Artillery, to be Assistant Topographical Engineer, with the brevet rank of Captain, 14th September, 1834, vice Graham, promoted.

3.—CASUALTIES.

Resignations.

Surgeon J. P. C. Macmahon, 30 October, 1834.

Second Lieutenant James Allen, 2d Artillery 31st July, 1834.

Second Lieutenant Philip St. George Cocke, 2d Artillery, 1st April, 1834.

Deaths.

Brevet Brigadier General Henry Leavenworth, Colonel of the 3d Regiment of Infantry, 21st July, 1834.

Brevet Lieutenant Colonel John Anderson, Topographical Engineer, 14th September, 1834.

Colonel Wm. Piatt, Paymaster, 16th August, 1834.

Assistant Surgeon Charles B. Welsh, 2d August, 1834.

Captain H. W. Griswold, 1st Artillery, 23d October, 1834.

Brevet Capt. Robert L. Armstrong, 2d Artillery, 10th Oct. 1834.

Second Lieutenant George W. McClure, Dragoons, 21st July, 1834.

Second Lieutenant Theophilus B. Brown, 3d Artillery, 14th Sept. 1834.

Brevet Second Lieutenant Geo. D. Dimon, 1st Infantry, 16th Sept. 1834.

2—The officers *promoted* and *appointed*, will report accordingly, and join their proper stations and companies, without delay; those on detached service, or acting under special orders and instructions, will report, by *letter*, to their respective Colonels.

By order of ALEXANDER MACOMB,
Maj. General Comd'g in Chief.
R. JONES, *Adjutant General.*

AGRICULTURE, &c.

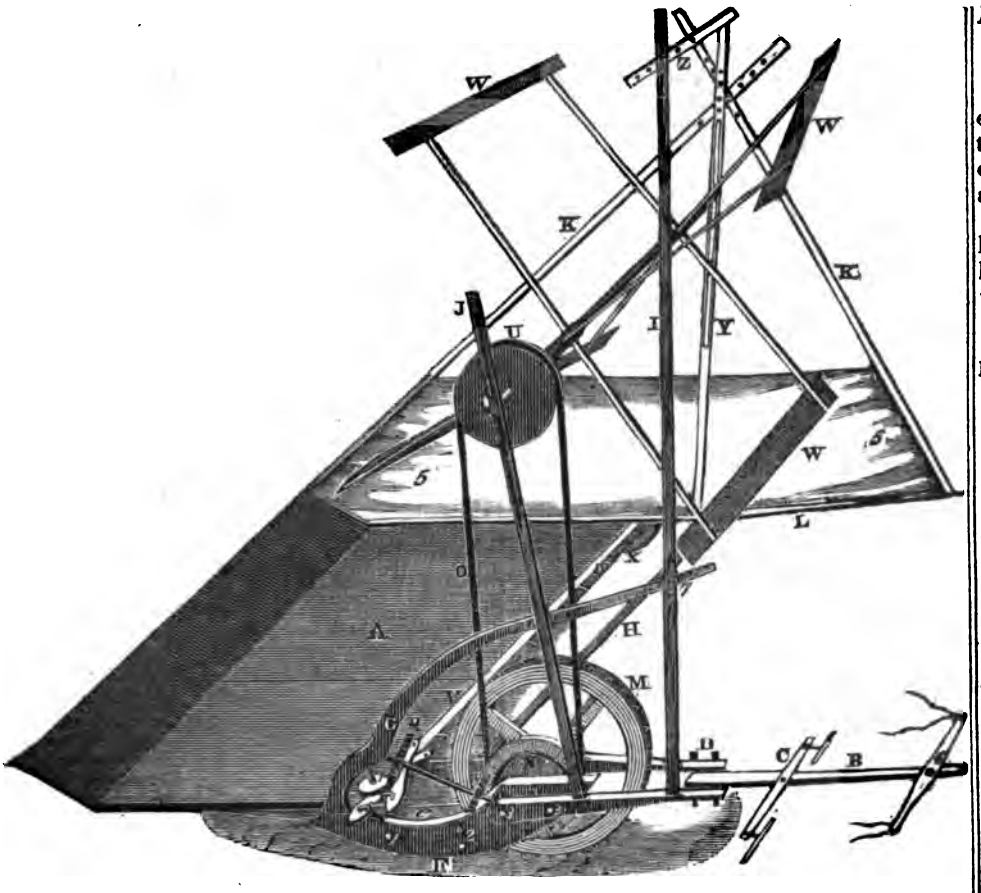
Cyrus H. M'Cormick's Improved Reaping Machine.

To the Editor of the Mechanics' Magazine:

DEAR SIR,—I send you a drawing and description of my Reaping Machine, agreeably to your request.

References—A, the platform; B, tongue; C, cross-bar; D, hinder end of the tongue; *e e*, projections in front; F, broad piece on each side; G, circular brace; H, diagonal brace; I, upright reel post; J, upright reel post; K, braces to upright; L, projection to regulate the width of swarth; M, main wheel roughened; N, band and cog wheel of 30 teeth; O, band; *p*, small bevel wheel of 9 teeth; Q, do. of 27 teeth; *r*, do. of 9 teeth; *s*, double crank; T, cutter; V, vibrating bar of wood, with bent teeth; U, reel pulley; W, reel; X, wheel of 15 inches diameter; Y, reel post.

The platform A is of plank, made fast to a frame of wood, for receiving the grain when cut, and holding it until enough has been collected for a sheaf, or more. The projections in front, *e e*, are two pieces of the platform frame, extending about 1½ feet in front, and one or more feet apart. On each outside of these pieces is to be secured a broad piece of wood, as at F, by screw bolts, as at 1 1, passing through them and the projection of the frame. From the end of the outer broad piece, nearest the platform, rises a circular brace, G, projecting forward, and secured to the reel-post, I, by a moveable screw bolt. About nine inches in front of the screw bolts, at 1 1, are two other *moveable* screw bolts, as at 2, passing through both broad pieces and the ends of both projections, allowing for a rise or fall in adjusting the height of cutting; and at about the same distance, further on, is to play an axis of a wheel to be hung between said pieces. Near each end of this axis is secured an arm with two screw bolts, as at 3 3, one of which is moveable, as will be seen; projecting before the wheel, where the tongue is made fast between them by means of two screw bolts passing through all at D. H is a diagonal brace. On the opposite side of the machine is another reel-post, Y, connected near the top with a piece, K, on each side, with a moveable screw bolt, and extending, one to the end of a piece, L, which is attached to the outside of the platform, and divides the grain to be cut, from that to be left standing, the other to the hind end of the platform. T is an upright post, secured to the braces of G and H, at 7, by a moveable



bolt, bracing the reel-post Y by means of a piece, Z, passing diagonally over the reel. 5 5 is a strip of cloth about as high as the grain, for the purpose of keeping entirely separate the grain to be cut from that to be left. On the axis, hung between the hind pieces, is a wheel, M, of about two feet diameter, having the circumference curved with teeth to hold to the ground by. N is a cog wheel on the same axis, which serves also for a band wheel, on which and the pulley U the band O works. The cog wheel *p* working into the cog wheel N, has another cog wheel, Q, on its axle, which works into another small pinion, as at *r*, attached to the double crank *s*. These cranks are in a right line, projecting on opposite sides of the axis and in a line with the front edge of the platform. The lower of these works the cutter T, along the front edge of the platform, and the upper one the vibrating bar V, counter to each other. The cutter is a long blade of steel, with an edge like that of a reap-hook, and is supported on the under side by stationary pieces of wood at suitable distances apart. This blade is attached to the frame piece, below the edge of the platform, by means of moveable tongues or slips of metal; the bolt securing it to said frame-piece acting as a pivot, and that through the blade likewise, so that the motion is described in part of a circle. The vibrating bar is of wood, of the same length, and secured in the same manner, above the cutter, with iron teeth made fast in it, at about 2 inches apart, extending before the edge of the cutter, and bent round under it. This vibrating bar has been and may be made stationary, with bent teeth supporting the stalks on each side of the cutter, thereby dispensing with the upper crank; but the other is much preferable, as it reduces the friction and liability to wear materially, by dividing the motion necessary for one between the two, and counterbalancing each other.

In the upper end of each reel-post is a groove, or long mortice, to receive the end of the axis of the reel, which rests on an adjusting pin, subject to be moved higher or lower, to suit grain of different heights—rye, wheat, or oats, &c. The reel W is composed of two or more cross arms at each end of the axle, projecting about 3 feet each way, and connected at their ends by a thin board of about nine inches in width, which, by the arrangement of the arms, runs in a somewhat spiral direction along the axis (though it might be parallel), the right end bearing up first on the grain. This reel, by the motion given by the strap O as the horses advance, bears the stalks upon the cutter, and when separated lands them on the platform A, which advancing till a sufficient quantity is collected, is discharged as often as may be required by a hand with a rake at the right end of the platform. On the left end of the platform is a wheel, H, of about 15 inches diameter, that may be raised or lowered as the cutting may require, corresponding with the opposite side. The point of the tongue is secured to its place by passing through a pin, 6, that is fastened to the hames of each horse by means of leather straps.

I have made some alterations on the drawing, which I think you will readily understand. Two horses were not used to the machine until the last harvest; the necessary changes of which were only described to the draughtsman, and were not all understood. I directed that it should not exceed 5¼ inches, though I think it does one way The wheel H I think has a wrong direction.

Very respectfully, yours, &c.

C. H. M'CORMICK.

Experiments on Potatoes. By M. MOORE, Jr.

To the Editor of the Quarterly Journal of Agriculture, Mechanics, &c.

SIR,—The following is the result of an experiment tried by me the past season, and thinking it might interest some of the readers of your Journal, have made the memorandum annexed.

I planted, last spring, potatoes of the same kind, on the same ground, all manures exactly alike, eleven different ways, and the result was as in the following table, viz.:

		Product. No. of potatoes.	lbs.	oz.
No. 1,	Planted a single eye, ...	9	3	14
" 2,	" two eyes, ...	14	5	2
" 3,	" three eyes, ...	14	5	15
" 4,	" two sets of 2 eyes each,	15	5	
" 5,	" do. 3 do.	25	5	
" 6,	" do. 4 do.	34	5	10
" 7,	" three sets of 2 eyes each,	24	3	2
" 8,	" do. 3 do.	27	4	
" 9,	" do. 4 do.	24	4	10
" 10,	" do. 5 do.	32	5	3
" 11,	" whole potatoe, with 11 eyes, ...	21	4	12

The size of the potatoes in No. 1 were as nearly of the same size as could well be; in No. 2, were good size, even; No. 3 were some very large, and others smaller; No. 4 were mostly of an even size; but all below were a great number of very small size. A farmer living near me had planted this spring an acre, and used 50 bushels of seed.

I endeavored to procure in New-York last fall, all the varieties of early corn I could, and had them planted on the 22d of May. I gathered on the 11th August the earliest kind, and it was fit to grind on the 18th, nearly two weeks previous to the next earliest, which was seed I procured of G. Thorburn, and which he called Cobbett's corn, he (Cobbett) having raised the same in England. The earliest kind had a long Indian name, hard to pronounce, and in distributing the seed this fall, I called it Moore's corn. Where I reside is 14 miles north of Utica; generally have frost in September, and I consider it important in raising corn that we should have the earliest.

M. MOORE, Jr.

Trenton Falls, Oct. 16, 1834.

Hops.—The Bangor Republican says there are farmers not thirty miles from Bangor who have taken a *thousand dollars* in cash as the clear income from their crop of Hops the present season. If this is correct the hop business must certainly be worth the farmers attention. Our farmers need more enterprise, and a better agricultural education. There are many ways in which they might turn a portion of their lands to much better account than they now do, and acquire for themselves a good living, and even independence, with one half the hard knocks and weary toils they usually endure. If they want their lands to produce money, let them turn their attention to the raising of Silk, Hemp and Hops, and they can get it.—[Portland Courier.]

Getting Spilt.—Yesterday, about fifteen large oxen were driven on board one of the steam boats at Market street, with a view of being taken across the river. While they were cogitating upon their new mode of locomotion, one of the animals broke the bar at the side of the boat, and fell overboard. The situation of the luckless animal excited the sympathies of his fellow travellers, who incontinently rushed over the side of the boat, and shared his watery accommodations. Twelve of the noble fellows turned their faces towards the island, which they soon reached, and three were drawn up at the slip. The question of freight, we suppose, will be left to some court of admiralty.

(We caution our compositor against heeding this paragraph "*bull*vestment,)—[United States Gaz.]

Cow-houses.—Among the objects of inattention by farmers is suitable covering for cattle in winter, particularly cows. Generally, among farmers, they suffer from too much exposure to cold and wet; and among milkmen in and near cities, from want of pure and wholesome air. The following is from the Edinburgh Quarterly Journal of Agriculture.

Cow-houses for dairy-cows ought to be 10 or 12 feet high in the side-walls, with proper apertures in the wall, and no lofts over the cows, that they may breathe abundance of wholesome air. Animals so large and well-fed as dairy cows, whose lungs are capacious, ought to have abundance of free air, as breathing of foul air is injurious to them, especially when many of them are placed in one cow-house. Cows do not require much heat, so that they are kept dry; too much fresh air cannot be given them. All cow-houses, and the roads into them, ought to be well paved, and kept clean, as the effluvia of dung or urine cannot fail to injure cattle; and it is a great advantage to cows that they be well cleaned and curried with a comb and brush once every day. Where thin flags of stone can be procured, one of them, about four feet square, should be placed on each side of every stall, for two cows. An iron rod, called a slider, about 20 inches long, should be fixed at both ends in a perpendicular position on each side of each flag, so that a cow may be bound to each slider, by a chain which should slide up and down on the slider when the cow raises or lowers her head. When bound in this manner, the cattle are very secure, and have all the freedom necessary to move and lick themselves. Stone troughs are now generally placed before the cows to receive their food; and a passage in front for feeding the cows is a great convenience. Every cow-house ought to have a tank or well to receive the urine. I saw nothing in continental husbandry that I would more anxiously wish to see introduced into Scotland, than the careful manner in which the urine of cattle, and every species of dirty water, is carefully preserved and used as manure to the land. The Belgians have not only tanks at their cow-houses for collecting the urine, but they have reservoirs on different parts of their farms, to which it is removed as collected, and kept in them, excluded from the air, till it be convenient to be sprinkled upon the ground, which is generally done a few days before sowing the seed for a crop.

Wool Exportation.—It is the opinion of intelligent persons, who have the means of judging, that within fifteen years from this time, American wool will be as important an article of export as American cotton is now. This opinion is justified by the unprecedented increase of the production for the last ten years: an increase which for the last two or three years has been calculated to be at the rate of twenty per cent. per annum. The amount of wool raised in the United States last year and brought into market, (without reference to that consumed at home,) was estimated at sixty millions of pounds. This year it is probably seventy-five millions; next year it will be ninety. Now, to see how this amount of production compares with that of England. England, we believe, produces one hundred and sixty million pounds per annum, and she cannot be expected to produce much more, as all her grazing lands are now taken up. She imports on the average twenty millions from Germany, and ten from Spain. The United States, then, at their present rate of increase, will soon take the lead in amount, and very probably in quality of production, and with so vast a territory adapted for sheep-grazing, will become the great wool market of the world.

Many years will not pass, probably, before the German system of selling wool at fairs will be adopted in our own wool-growing districts. While wool, as at present, is sold at the farmers' doors to manufacturers and manufacturers' agents, a wide field is spread for speculation, and occasionally for fraud. The farmer, on his remote homestead, cannot possibly have so early or accurate information as the manufacturer, of the changes in the markets. It is impossible for him, at a distance, always to tell with precision what is the fair market price, or whether it is best to sell or hold on. These evils were equally felt abroad, until a remedy was devised. The Leipsic fair, which is the principal one, concentrates all the wool of a district of three or four hundred miles in diameter, and is attended by purchasers, not only from all the European States, but occasionally from this country. The advantage of combination is here enjoyed by the seller as well as the buyer, and every individual can ascertain in a short space, and with the greatest certainty, the highest market value for his wool. The competition on either side is so open and direct, that there is very little opportunity for fraud or mistake.

The small growers would be more benefitted by the establishment of wool fairs than the large ones. In Vermont there are individuals who sold their wool last year for between three and four thousand dollars each; and there is a single township, (that of Orwell in Rutland county,) in which seventy thousand sheep are assessed, and probably a considerably greater number are owned. Wool-growers on such a scale as this can afford the trouble of watching the markets, and the expense of obtaining information; they can even control to a certain extent the markets of their vicinity. The owners of small flocks have none of these advantages, and the average price which they obtain is considerably less than that obtained by the large growers.—[Springfield Mercury, Mass.]

Chinese Mulberry.—The Secretary of the H. F. and H. Agricultural Society, in April last, received from Canton, China, some Chinese mulberry seeds, Morus multicaulis, through the agency of gentlemen residing there, and having the privilege of penetrating the interior. The secretary forwarded by letter a few of these seeds to several friends down east, from one of whom an acknowledgment has been made, an extract of which follows: "The Chinese mulberry seed you sent by letter, the last of May, have produced 43 fine plants of Morus multicaulis, which are valued very highly. The tallest is now, (August 23,) over two feet in height. This year have two kinds of worms, one the common, the other on account of yielding the greatest weight of cocoons, and considered the best and most valuable kind among us—(County of Essex.) Both kinds fed alike, and from leaves of the same white mulberry trees. The largest cocoons of each kind were selected and weighed—of the most valuable kind, took 18 to weigh an ounce, and of the common kind took 33 to weigh an ounce. Then took of all sizes without selecting and taken promiscuously, six ounces of each kind. Of the best kind took 183 to weigh six ounces, and of the common kind took 258 to weigh six ounces, being equal to 488 of the best kind to the pound, and 688 of the common kind to the pound."

The letter does not state *how often, how attentively, or how long fed*, but shows the result in feeding different kinds of worms. That the best attention was *not* given to the feeding seems probable, from an examination of the Essex Agricultural Report of 1833, where in one case 208 cocoons, the moth not stifled, being *selected* from 20,000, weighed one pound, being about 18 to the ounce—but on an average took 330 to the pound, and were in feeding 32 to 40 days. The committee in Essex say: "There is no mystery in the culture of silk. The whole process, from rearing the mulberry tree to the production of silk, is simple and easy, and our farmers, by turning their care and attention to this business, would obtain a much more profitable reward than in the usual course of field husbandry."

The following experiment has been made in the county of Hampshire. Two families have fed the same kind of worms upon leaves of the same trees, (white mulberry,) but there was a very different result: while, in one family, the worms produced cocoons of less weight, the other, by superior attention, produced cocoons of a large size and weight. The parcel of worms having superior attention, were 28 days in feeding and winding, and produced cocoons, 230 of which weighed one pound, the moth not being stifled. But the other parcel of worms in the other family, supposed to have less attention, were 35 days in feeding, and required 583 to weigh one pound.

From the foregoing, two important facts are developed, to wit, 1st, That there is a great difference in the quality of worms, although fed alike. 2d, That the same kind of worms, having the *same kind* of food, but superior attention paid to feeding, cleaning, &c., have produced more than double, yes more than 150 per cent. in favor of superior attention to the worms. The usual mode of feeding worms is to keep them on shelves or tables; to clean them from the offal, it becomes necessary to remove the worms to another place upon mulberry leaves. But a better mode has been adopted by the family mentioned in the second fact. In this family the worms are placed on netting, and there fed without the necessity of a removal. The offal falling upon a paper screen beneath, and easily removed without molesting the worms, and when ready to rise for winding, elevate themselves upon and behind another netting near the wall, but connected with the netting whereon they were fed, affording a pleasant sight, being distributed upon the meshes: the whole paraphernalia of bushes are rendered unnecessary, the cocoons more easily separated, and less waste of silk. S.—[Northampton Courier.]

Cultivation of Madder.—Mr. Tucker: There are consumed in the counties of Oneida and Oswego, by three manufacturing establishments, about two hundred and thirty-four thousand pounds of Madder every three years. The article is dug from the ground once in three years. Suppose each acre produced from 1500 to 2000 lbs.; but say the former, on a common soil, it would require 156 acres of land to produce madder for these establishments; and perhaps the remaining manufactories, cloth dressers and families, use half as much more, making in the whole 351,000 lbs., which at 15 cents per lb., the average price of best Dutch madder for the last twelve years, is over $50,000. What a large sum to send to foreign countries, for an article which can be cultivated here as well as potatoes! I am well aware that less than 156 acres will produce the above amount; as, according to the quality of the land and cultivation, it will produce from 1500 to 2000 lbs. of dry madder. I think it would produce 2000 lbs. on land that will yield in a good year 50 bushels of corn to the acre. The whole cost of cultivation on rich deep loam, say sandy loam, digging, washing, drying, grinding, rent of land, seed, and interest of money, at 2000 lbs. to the acre, will not exceed 7 cents per lb. There are without doubt, on most farms in these counties, a few acres of land at least suitable for the cultivation of this article. I consider that the demand will be for years unlimited; as there is not as yet, in the circle of my acquaintance, more than twenty-five acres under cultivation, nine of which are under my management. The price of American madder, for the three past years, has averaged about 23 cents, wholesale. The time for digging, as also for selling the top roots, or seed, is from the 15th of September to the 15th of October; the price at this time is $3 per bushel, by the quantity. These top

roots are buried in the fall like potatoes, and planted the following spring in drills, six feet apart between the drills, (giving room for a crop of potatoes the first year,) and 12 or 18 inches apart in the drills. It is better to purchase the seed in the fall, as it will bear transportation much better when the buds are not much started,—and the price is considerably lower. The bottom roots are also dug at this time, and washed, (or rinsed, if dug from a light soil,) dried, &c. I have, of three years old roots, unengaged, 150 bushels, or enough to plant from 23 to 25 acres.

Mr. James Eaton, of Winfield, Herkimer co., is a successful cultivator and an honorable dealer in the article. There are others also, so that applicants can be supplied to a considerable amount. For more particular information, as to the cultivation of madder, see "Phinney's Calendar, or Western Almanac, for 1834,"—also a communication in the Cultivator for August, in which is stated my success in the cultivation of this root for two or three years past.

As it is not the intention of the subscriber to offer any remarks to the public but what he believes are founded in truth, he respectfully invites editors of newspapers devoted to agriculture and manufactures, to copy some portion of the above into their respective papers—also other editors who may consider the subject important to the public.

A small package of ground madder will be sent, on application, to the care of the President or Committee of any Agricultural Society in the state, previous to their annual fair, for the inspection of members interested.

RUSSEL BRONSON.

Bridgewater, Oneida co., Sept. 1, 1834.

RIBBON GRASS.—The ribbon grass of our gardens, *Phalaris americana*, is likely to become of great value in our husbandry; it has been found to be better adapted to wet boggy grounds than any other species of grass; to propagate rapidly, either by its seeds or by its roots; to yield a very large product in hay or pasture, and to be well adapted to farm stock. The first suggestion of this fact came to us in a letter from Abedn. Robinson, of Portsmouth, N. H., who says the discovery was accidental.

"A neighbor," he says, "wishing to get rid of some of the roots which encumbered his garden, threw them into a bog, where they took root, and spread over a large space of ground, excluding every other plant. The water flows through the roots at all seasons. The turf has become so solid as to bear a cart and oxen. I walked through this grass when in bloom, and never beheld a more handsome and luxuriant growth. It stood perfectly erect, full of large leaves, even, and from four to five feet high. It will produce two good crops in a season, and springs up immediately after the scythe. It produces excellent food; cattle feed it close, and appear to be more fond of it when made into hay than any other grass. I have spoken for one half of the roots of the patch, and have ground ploughed in my meadow in which I intend to transplant them, at about the distance of corn hills."

On a recent visit from the Hon. E. Goodrich, of Hartford, we were happy to receive, from that gentleman, a confirmation of the good opinion of the Phalaris which had been induced by Mr. Robinson's letter. It has been found as beneficial in Connecticut as in New-Hampshire. Not recollecting the particulars narrated, we would beg of Mr. Goodrich, when he sees this, to forward them to us, in order that we may publish them correctly. The subject merits further attention; and if our anticipations are not irrationally founded, the Phalaris americana will yet become the gama grass of the north. It is truly perennial, spreads rapidly, and may be inoculated in the manner suggested by Mr. Robinson, especially in a soil saturated with water, with great facility, and at trifling expense.—[Cultivator.]

NATIVE CATTLE.—Having lately observed a new property in the native breed of cattle belonging to Mr. Ralph Haskins, of Roxbury, I am desirous to inquire through the medium of your paper, whether there are any other ones possessing a similar quality.

This milk consists in the remarkable richness of the milk and cream, the latter of which, when separated from the milk for the space of twelve hours, becomes of the consistence of a baked custard, and may be turned upside down without any harm, or spread on like butter. Cream in this state has been repeatedly carried into State street, and gentlemen in the Insurance Offices have churned it, and brought the butter in less than a minute.

Mr. Haskins states that, notwithstanding the richness of the cream, the milk, after it is skum, is much richer than common skim milk, and the cows also give as much as others usually do.

He has received premiums at Brighton for two of them, one of which, we understand, he has lately sold for 150 dollars.

If any of your readers have ever known such an instance before, they would much oblige a subscriber if they would mention it in your paper. S.—[Boston Advocate.]

APPLES.—There has not been such a scarcity of apples in this part of the country since the year 1794. The cold weather in May destroyed almost all the fruit on the hills and in the valleys. Some persons have a few apples and will make a small quantity of cider, but the greater part have hardly enough for apple pies, and will be destitute of cider, apple sauce, and winter apples. So far as we have observed, there are more apples on the trees in the meadows and low lands near Connecticut river, than any where else. We have heard old people make the same remark in regard to apples in 1794.—[Hampshire Gaz.]

TAKING UP THE ROOTS OF THE SCARLET RUNNERS IN AUTUMN, AND REPLANTING THEM IN SPRING.—I have practised this mode of culture for some years. When the frost destroys the leaves and shoots, I take up the roots, keep them in sand through the winter, and replant them in May. They grow stronger, and begin to flower much earlier than beans planted in the common way, and never stop bearing till the frost destroys them. I have not set the plants more than one year, but a friend of mine has a plant six or seven years old, which looks as well now as it did the first year; and he has also a row now in pod, which were not either taken up or covered last winter. N. S. N. Nottingham, July 4, 1834.—[Loudon's Gardeners' Magazine.]

PAINTING HOUSES.—A writer for the New-England Farmer, whose communication was published vol. i, page 314, says, "I believe it is a general practice for people to do their painting some time during the three summer months; but repeated experiments have been made within a few years, which prove that a house painted late in autumn, or in the winter, will hold the paint more than twice as long as one painted in warm weather. The reason is obvious—for when the paints are applied in *cold* weather, the oil with other ingredients form a *hard cement* on the *surface* of the clapboards, which cannot easily be erased; whereas a building painted, (as usual,) in the heat of summer, will soon need a new coat; for the heat causes the *oil* to penetrate into the wood, and leaves the other component parts dry, which will soon crumble off."

JEWETT'S CHEMICAL WATER-PROOF.—Among the superior articles exhibited at the recent Fair of the American Institute was Col. Jewett's water-proof paste. A boot which had been saturated with it had been standing in water three days without being in the least moist on the inside. A lady's slipper was similarly exposed, with the same results. We have tried it on boots and can speak favorably of it, although, as yet, we have made but a partial trial. The information we have given on this subject in former numbers of the New-York Farmer, together with the following subjoined certificate, cannot fail of recommending it to the notice of our readers. Should it prove a desideratum in protecting the feet from wet, it will be of incalculable benefit to the health of all classes, particularly to farmers, who are constantly exposed, most of the year round, to rain, a damp and wet ground, or to dewy grass.

"Executive Office,
"Columbus, Ohio, June 21, 1834.

"Having worn shoes for the past five months, to which Col. Jewett's Chemical Water Proof had been applied, I can from experience recommend it to the community at large, under the impression that all who use it will find it much to their interest and comfort. I immersed one of those shoes under water, which had been saturated, and found that the leather was made perfectly impervious to water and remained soft and pliable. I believe that leather thus saturated will wear longer than it otherwise would, and conceive the paste to be an article of immense value, and its discovery of great importance to the public.

"ROBERT LUCAS,
"Governor of Ohio."

THE MASHANNOCK POTATO.—We received in a letter from a subscriber in Indiana, last week, a small fine looking potato, in which he gives the following account:

"I send you in this letter the celebrated Mashannock Potato of the west. I call it the Mashannock of the west, as it was produced from a seed of the Mercer potato, by an old Irish woman in Columbiana county, Ohio, about the year 1820. This variety spread over the country in 1824 with such rapidity as to reach almost every farm that year. Since that time it has had no rival among the old varieties. It remains in full perfection to the present day. The Mashannock potato greatly resembles the Mercer of Pennsylvania, but is superior to it in every respect. The Mercer potato is shorter and whiter, and I believe the product not more than one-fourth as much. If your farmers have not this kind of potato already, they will do well to try it.

"The Mashannock has vines of a beautiful light yellow color, medium size, soft and spreading. A common potato is six inches long, as thick as a man can span, and flattened in its form. Overgrown ones are much larger, some seasons weighing from two to three pounds, with lumps on the sides. The vines bear a moderate quantity of small seed-balls, and some seasons when the crop is very good the ground is nearly covered with them. These seed-balls make the greatest variety of potatoes, and the most promising kinds of any I have tried. They sport in endless variety of early and late, large and small, and all colors except red. Of one thousand seedlings raised by myself in 1832, not one was red, mostly long shaped and excellent.—[Genesee Farmer.]

NEW-YORK AMERICAN.

NOVEMBER 1—7, 1834.

LITERARY NOTICES.

The REVIEW for this week is of necessity postponed. We may comment, however, briefly, on publications lying on our table.

From the *Messrs. Harpers* we have in two very well printed, close and thick volumes, the *Life and Correspondence of* HANNAH MOORE, which, from the oretaste our readers have had of it through these columns, willl be eagerly sought after, we do not doubt.

From *John Doyle* we have one of the London annuals—*The Gem*—of which we have only had time to glance at some of the engravings.

Carter, Hendee & Co., of Boston, have sent us the *third and fourth book of history*, designed as a sequel to the *first and second book*, by the author of Peter Parley's tales. All these we shall have occasion to speak of again.

We conclude with a notice from the New York Mirror of a book about to appear, which will claim the admiration and patronage, we are sure, of very numerous readers—*Mr. Dunlap's* History of the Fine Arts in the United States.:

[*From the New York Mirror.*]

A HISTORY OF THE RISE AND PROGRESS OF THE ARTS OF DESIGN, IN THE UNITED STATES. BY WILLIAM DUNLAP. IN TWO VOULUMNES. VOL.

We have been favoured by the author of this valuable and highly interesting work, with a copy of the first volume, in anticipation, and have been much struck, in the hasty perusal our leisure has enabled us to give it, not only with the quality, but the immense amount and variety of information it contains. Perhaps there is not another man living besides Mr. Dunlap, who could have gathered together such a mass af facts, extending through the whole period of our national existence, and relating to every individual who has wielded a maul-stick, or a chisel, or handled a burin, any where detween Canada and the Gulf of Mexico: from John Watson, who fleurished, after a fashion, in 1715, down to the multitude ot clever and rapidly-improving artists of whom as Americans, we are proud at the present moment. But it is dot only as a copious and faithful record of the rise and progress of the arts among us, that the book deserves and claims the most ample success; it abounds with judicious criticism and most amusing anecdote; and readers of all classes will find in its pages instruction richly mingled with entertainment. To the artist, of course, it will prove invaluable; but a very large proportion of the matter it contains address themselves with equally pleasant and happy effect to the scholar, the man of busines in his hours of relaxation, the student of human nature, the literary idler, and even to the belle, when wearied with conquest and admiration—to such as read merely for amusement as well as to the seeker after knowledge. It is an admirable fire-side companion; open it as you will, you will find an abundance of choice morsels; roving with most agreeable variety, "from grave to gay, from lively to severe." You may read it through at once, or keep it on your table or beneath the pillow of your sofa, and take it up whenever you have a spare half hour; and, when you have turned the last leaf of the second volumne, you will be strongly tempted to wish you could forget every word, and begin again with all the zest of novelty hanging fresh about its pages. We have already given the readers of the Mirror some columns of delightful extracts; but there are plenty more, and we shall, perhaps, draw again upon its stores for the entertainment of our readers, without the slightest fear of wearying them, or producing any desire in their minds except of becoming early purchasers. We have found in it, by the way, a piece of information which is very little known, and which we are glad to see made public, inasmuch as it tends to correct a general, but erroneous impression. Here it is:

"Mr. Leslie returned to London. In the only interview I had with him, which was in my sick chamber a day or two previous to his embarkation on his return, he did not express any feeling of disappointment. With the government of the United States he certainly had no cause of complaint. He was invited to West Point as a *teacher* of drawing, with the same emoluments and accommodations which his predecessors had enjoyed. But his friends, anxious that he should be with them, had assured him that the teachership would be made a professorship, with additional advantages corresponding with the other professors, and that a painting-room should be built for him. But in our representative government, this reqnired an act of congress, and the passage of the yearly appropriation bill. This act and appropriation was intended: but Mr. Leslie had taken post at West Point, at the commencement of winter, with his family, never before out of London. The winter is a trying season in a bleak situation on the Hudson—a situation at other times redundant with charms. Mrs. Leslie is a London lady, and her family remained occupants of the house left by the artist; her heart was naturally at home. Leslie, I am told, upon an answer from the secretary-at-war, that he could not order a painting-room built until uppropriation was made for it, gladly resigned the situation, and took his family to London again, no doubt happy to escape from the bleak promontory on which they had passed a discontented winter."

We have but one remark to make in addition; we think "the teachership" ought to "be made a professorship" and that a painting room, *should* be built by the government for the incumbent. The inadeqaate salary attached to the office makes it indispensable for the artist whe fills it to employ his leisure hours to more pecuniary advantage than he derives from his labors in the institution.

FOREIGN INTELLIGENCE.

EIGHTEEN DAYS LATER FROM PORTUGAL.

Death of Don Pedro.—By the ship Lorena, Urquhart, from Lisbon direct, the Editors of the New York Daily Advertiser have received files of Lisbon papers to the 7th October, from which they learn place on the 11th Sept. and had caused general regret the death of Don Pedro, Duke of Braganza, took throughout the Portuguese nation. The Queen was in exercise of Royal powers, according to the Constitutional charter, and the approval of the Cortes.

The Chamber of Deputies and Peers had sent joint committees to express to her Majesty their sentiments of condolence ior the loss the Queen and the whole nation had met with by the death of Don Pedro. The Diplomatic Corps attended.

The inhabitants of Lisbon had, en masse, sympathized with the Queen and august family. The funeral ceremonies had taken place with all possible pomp on 2d Oct.

The Queen had, by a decree, granted several pardons; and at the same time stated that as she was clement towards those who in past times trespassed, she was much more rigorous, and would punish with all possible rigor such persons as should still adhere to rebellion, and to disturb the public peace.

The Chambers continued their legislation for the perfect organization and well being of the nation.

The latest news from Spain was calculated to bring dismay to the Carlist party, which were destitute of every thing, and pursued by the Spanish army.

News had been received of fresh disturbances in Rome, in consequence of which the papal funds have lowered one franc.

LATER FROM FRANCE.—By the *Francis Depau*, from Havre, we have Paris papers of the 5th ult., which furnish London dates of the 3d.

The intelligence of Don Pedro's, death at Lisbon, reached Paris on the 5th.

MR. ARMAND CARREL surrendered himself on the 5th to the Police, and was sent to St. Pelagie to undergo his term of imprisonment.

The affairs of Spain are yet undecided, though the accounts represent the affairs of Don Carlos as in a poor way. The cholera is destroying a great many lives in various parts in Europe. Commercial affairs appear to be in a prosperous condition.

Mr. *William Blackwood*, the proprietor and publisher of the celebrated Magazine which goes by that name, died at Edinburgh a few weeks ago. He had been in a very delicate state of health for some time past. He was considerably advanced in life.—It is not generally known that he was editor as well as proprietor of Blackwood's Magazine. He was greatly assisted by Professor Wilson. Not only were all that distinguished writer's contributions inserted, but his recommendation or otherwise of the articles of others went a great way in influencing the decision of Mr. Blackwood. Mr. B. corresponded himself with all the contributors to his Magazine, and by this means increased their attachment both to it and himself. He was extremely liberal in the remuneration he gave for contributions.—Other publishers regulate the price they give for artacles by the length to which they extend; but Mr. Blackwood, when he met with an article that particularly pleased him, would often give four times the price for it which it would have brought if paid by the sheet—adding, when authors would have expressed their surprise at their liberality, that he never paid for literature by the yard, as if paying for a piece of cloth; but he wished to measure the, quality rather than the quantity. This Magazine is a most valuable property. Perhaps it is the most profitable of the kind in the world. It has a circulation of nearly 9,000 copies monthly.

☞ See page 702.

SUMMARY.

Mr. Webster, Mr. Ewing, Mr. Grundy and Mr. Southard, all of the United States Senate, are here in order to examine, as it is understood, a portion of them into the affairs of the United States Bank and the deposite banks; and another portion into the affairs of the Post-office. Their stay will, it is probable, be prolonged several days.

[*From the Frederick (Md.) Herald.*]

Judge Duvall of the Supreme Court.—In our last we copied an article from the New York Commercial, which stated that it was the intention of Judge Duvall to resign his seat upon the bench of the supreme court of the United States. This report is confirmed by a gentleman who has recently conversed with the judge upon the subject. The reasons assigned for this act are his advanced age and the infirmities consequent thereon,—particularly a partial deafness, which much impairs his usefulness, and, in some measure, disqualifies him for a proper discharge of his judicial functions.

By the *Wm. Gibbons* from Charleston, (S. C.) we have accounts to last Saturday Evening.

NEW ORLEANS, Oct. 20.—The brig Ariel, arrived this morning from Norfolk, brings about 209 negroes, probably for the purpose of increasing the number of vagabonds and thieves with which our city is already amply provided.

The schooner Philadelphia, which sailed from Aransas, Texas, on the 6th instant, arrived here this morning. She has on board about forty emigrant passengers from Power's colony on the Mission river, Texas. We learn from a passenger on board that they are completely disgusted with the country,—that nearly all the colony, principally composed of Irish, had been sick with the fever, and that a number of deaths had taken place among them—it is further stated that it is the intention of all the colonists to leave the country as soon as possible. Those who came passengers in the Philadelphia were more or less afflicted with fever and ague when they left, but were rapidly recovering.

We hope that some steps will be taken by our liberal-minded citizens to mitigate the distresses of these unfortunate emigrants.—[Courier.]

NEW ORLEANS, OCT. 22.—A very sudden and sensible change has taken place in the state of the weather. Winter has come upon us unawares. The rain of Saturday evening was succeeded by a chilling and cold day. On Monday morning, we noticed many a half naked and shivering slave in the market places on whom this stolen march of bleak winter seemed to operate with impunity, while the better prepared for the visit, were wrapped in furs and covered with over cloaks.

NATCHEZ, OCT. 17.—*Two Steamboats Sunk.*—On the 4th instant, fifteen miles above Helena, the Tom Jefferson struck a snag, became unmanageable, floated down, and sunk in about six feet water on a sand bar. Her cargo consisted of merchandize for the upper country. Report said it was not insured. The boat is broken in two.

The Return on the 5th instant, on her way down, run upon a sand bar near Princeton, Mi. and in getting off, struck a snag and sunk in five feet water. She was loaded principally with Bagging and Rope. A merchant in Grand Gulf, had goods to the amount of fourteen thousand dollars on board, not insured.—[Gazette.]

The Cooper Fund.—The sum of five hundred dollars was cleared at the benefit in Cincinnati in behalf of the Cooper Fund. The amount was immediately

remitted to the treasurer of the fund, W. T. M'Clure, Esq. of New York.

MR. MILLS' ASCENSION FROM LANCASTER.

To the Editor of the United States Gazette:

PHILADELPHIA, SUNDAY AFTERNOON.

SIR:—In conformity with the desire of some friends in Lancaster, I made, on Saturday, the 1st of November, an ascension from that place.

Half an hour before the specified time, I had my balloon completely inflated; and as the spectators were already on the ground, I set off six minutes before three, P. M. although I had announced my intention of going at three.

At that time, the thermometer indicated a temperature of 54 deg. and the barometer stood at 29 deg. 8'. The wind nearly due east, was light and irregular. My course was at first westward, so that I passed immediately over Lancaster, when a change of current took me several miles in a northwestward direction. As I did not rise high, I could distinctly hear the sound of the horses hoofs, as their riders pursued me. My elevation at that time, was 27 deg. 5' and the temperature 44 deg.

A new and higher current of air from the north and west, soon drove me back towards Lancaster; which, as I passed it, appeared to be half a mile or less to the westward of my course. I could see the assemblage in the inclosure in which I had left them, but I was out of hearing of their salutations. My elevation at this time, was about 24 deg. 5' or, very nearly a mile above the earth.—At this time, I could see a vast expanse of beautiful country, and among other objects, recognised the Susquehanna, and its bridge, at Columbia.

Soon after leaving Lancaster for the second time, I entered and passed through the clouds, which though thick enough to conceal the earth from view, did not seem to be more than 20 or 30 yards in thickness. Emerging from this *stratum*, I suddenly found myself in a bright sunshine, with a vast field of white opake vapours below me, convoluted into singular forms, and presenting a variety of elevations and cavernous depressions.

I continued above the clouds for nearly an hour, and during that time saw the earth only three times and then but for a moment, as the rolling clouds beneath happened to break their well preserved continuity

As I fell below the clouds, I was surprized to see a beautiful river, full of boats and vessels, and to find myself almost immediately over a small town, on its margin, while I saw another of greater size at a little distance inland. After some reflection, I felt sure that it was not either the Susquehanna or the Chesapeake, but it never entered my head to suppose that I could have travelled so far as to have reached the banks of the Delaware, at New Castle, and that the beautiful city of Wilmington lay in sight, to the north of my position.

Attempting to descend here, to avoid crossing the river, I encountered the eastern current, with which I had started at Lancaster, and was carried by it across the State of Delaware. I, at 5 P. M. precisely, touched the earth, near Cooch's Mills, 3 miles from Elkton.

As I passed over a house near this place, some white people hailed me, "who are you?" I replied by asking "where am I?" to which they answered, "go back where you came from." I soon after let go my anchor near to the turnpike, and fortunately it laid hold of a fence, when I called to two black men to come to my assistance, which at first they declined, without giving me any answer in words. After repeated solicitations, they were induced to approach, and drawing down the balloon, brought me to the ground.

Soon afterwards, I was joined by a party on horseback, from Elkton, who taking hold of the anchor rope, as I sat in the car, carried me, sailing through the air, along the turnpike, to Elkton, a distance of 3 miles, where at half past 6, I arrived in safety: discharged the gas, folded the balloon, and at 7, had finished the folding and securing the balloon, car, &c.

As we passed along the turnpike, the intervention of trees sometimes made the road too narrow for the passage of the balloon, which was then, by lengthening the cable, elevated above them, and brought over their tops.

This morning I went to Frenchtown, and by rail road and steamboat reached Philadelphia at 5 P. M.

It is not easy to tell the exact distance traversed during the two hours and six minutes passed in the air, but it was probable, that it was not less than *one hundred miles*.

In descending, I adopted a simple plan of estimating the force and direction of the current beneath me. A feather of sufficient size to be visible at a distance, loaded in such a manner as to fall slowly, floats along with the balloon and its current, until it enters another atmospheric movement, when it is seen to take the new direction. The aeronaut may thus be guided to a choice of current before he enters it. In ascending, the same kind of knowledge may be had by letting off very small balloons prepared for the purpose, and carried up in the car,

I cannot conclude, without expressing my thanks to the friends at Lancaster, who gave me countenance and assistance, and to the good people of Elkton who did every thing in their power to promote my comfort and convenience.

The annexed Table, will showt the various altitudes, and their corresponding temperatures. I should have noted the time of entering the clouds,-and their exact elevation, but I was so completely absorbed by the beauty and variety of the phenomena, that I entirely forgot to make at that time, the necessary observations. I am, very respectfully, yours, &c. JAMES MILLS.

Time.	Barometer.	Thermometer.	
2 54	21 8	59	W.
3 5	27 5	44	N.W.
3 15	25 0	46	N.
3 20	22 2	34	E.N.E.
3 30	20 4	32	S.E. by S.
4 0	19 9	34 30	

[*From the Boston Daily Advertiser.*]

THE UNITED STATES AND BRAZIL.—The Aurora Iluminense of Rio Janeiro, of Aug. 22, publishes under the Rio Janeiro head, the following article, from which it would appear that a project is entertained in that quarter, at least by some individuals, of political union between this country and the Empire of Brazil. A formal exposition of a similar kind was made some years ago, as our readers will recollect, by the Republic of Central America, and rejected. The same result would probably occur in the present instance, if the offer should really take place, which, however, we do not consider probable. We have seen no intimation of any such intention other than that conveyed by the motion of the Messrs. Franca, which does not seem to have been sustained, and was apparently the act of a few individuals.

Rio Janeiro.—In the House of Deputies the following bill was offered, and a motion was made to proceed to the consideration of it immediately, which was rejected. We deem it unnecessary to add any commentary, remarking that we publish the bill in the exact form in which it was presented by the Deputies Franca.

Decree of the Legislative General Assembly.

Article 1.—The Empire of Brazil and the United States of America shall form a union for their mutual defence against foreign aggression, and for their common advantage in matters of domestic interest.

Article 2.—The two nations shall assist each other with all their forces against any hostile attack, and shall contribute annually for this purpose such sums as may be agreed upon.

Article 3.—Each of the two nations shall have Representatives in the National Assembly of the other.

Article 4.—The products of each nation shall be received in the ports of the other on the same footing with its own, and held exempt from any foreign duty.

Article 5.—The two nations shall aid each other in effecting a communication from one to the other of the useful institutions, arts and products that may now belong respectively to each.

Article 6.—The citizens of each of the two nations shall enjoy in the territory of the other all the privileges of natives.

Art. 7.—Questions of right occurring between citizens of the two nations, shall be decided either by mutual consent, by arbitration, or by a jury composed of equal numbers of both.

Art. 8.—The nations bind themselves to aid each other in the preservation of a national form of government, and against any dangers that may threaten their moral or physical improvement.

Art. 9.—The Government of Brazil will endeavor to negotiate a treaty of alliance to this effect which shall be permanent.

Art. 10.—This treaty when concluded shall be laid before the General Assembly, for its consideration and approval.

Art. 11.—All preceding laws in contravention of this are revoked.

House of Deputies, Aug. 18, 1834.

[Signed,] C. J. FRANCA.
A. J. FRANCA.
E. J. FRANCA.

OFFICIAL.—NAVY REGISTER.

Changes, Notices, &c. for the month of October, 1834.

VESSELS OF THE DIFFERENT SQUADRONS.

Mediterranean.—Ship of the Line—Delaware.—Frigates—United States, Constellation, and Potomac. Sloop—John Adams. Schooner—Shark.

West Indies.—Sloops—Vandalia, St. Louis, and Falmouth. Schooners—Experiment and Grampus.

Coast of Brazil.—Sloops—Natchez, Ontario, and Erie. Schooner—Enterprise.

Pacific.—Frigate—Brandywine. Sloops—Fairfield and Vincennes. Schooners—Dolphin and Boxer.

NOTICES.

Delaware 74, Captain Nicholson, Com. Patterson on board, was in the Levant the last advices, (29th August,) having visited Egypt and Syria, and was expected at Malta about the middle of September, on his way down.

Frigate United States, Captain Ballard, returned to Vourla Bay about the 5th August, from a cruise in the Gulf of Salonica and its neighborhood, all well, and was near Smyrna the 29th August.

Frigate Constellation, Captain Read, arrived at Malta 17th July from Naples, and sailed again the 21st for Tripoli and Tunis, on the way to Mahon.

Schooner Shark, Lieut. Comd'g Paulding, was in company with the Delaware, above noticed.

Sloop Vandalia, Captain Webb, still at Norfolk, under repairs.

Sloop St. Louis, Captain McCauley, still at Norfolk, but on the eve of sailing for her station in the West Indies.

Sloop Falmouth, Captain Rousseau, sailed from Pensacola 9th October, on a cruise, to return about the 10th of January.

Schooner Experiment, Lieut. Commanding Paine, and schr. Grampus, Lieut. Comd'g White, were still at Pensacola the 12th Oct.

Sloop Natchez, Capt. Zintzinger, bearing the broad pendant of Com. Renshaw, left Rio the 14th August, and arrived at Bahia the 21st; still there 3d September, and to sail for Rio that evening or the next morning.

Sloop Ontario, Capt. Salter, left Rio the 14th Aug; arrived at Bahia the 31st from Pernambuco; was there 3d Sept.

Frigate Brandywine, Capt. Deacon, sailed from Rio for the Pacific station 14th August.

Sloop Fairfield, Capt. Vallette, was at anchor off the Island of Puna, in the Guayaquil river 25th August—all well.

Sloop Vincennes, Com. Wadsworth, sailed from Payta 12th August for Callao.

Schooner Dolphin, Lieut. Commanding Voorhees, was at Callao the last advices (25th August.)

Schooner Boxer, Lieut. Comd'g Page, has probably left Norfolk before this for her destination in the Pacific.

Frigate Potomac, Captain Nicholson, sailed from Boston 20th October for the Mediterranean station.

THE MAILS,

For the Mediterranean, can be sent by the ship Herald, to sail from New York 12th instant; and by two shore ships, to sail from Norfolk from the 10th to the 16th instant.

For the Coast of Brazil, by the brig Paulina, to sail from New York for Rio 14th instant; and by a store-ship, to sail from Washington about 15th instant.

For the Pacific, by the ship Leonidas, to sail from New York 15th instant; and by store-ship, to sail about the same time from Washington.

NAVY DEPARTMENT, *November, 1st*, 1834.

NAVY DEPARTMENT.

Extract of a letter addressed to the Secretary of the Navy, by Capt. HENRY E. BALLARD, dated U. S. frigate United States, Nauplia de Romania, August 22d, 1834.

"I do myself the honor to inform you, that in obedience to my instructions, I reached this anchorage three days ago from a cruise amongst the Islands—all well—and that I shall sail for Athens and Smyrna, as soon as the land breeze comes to us to-night.

"We had the pleasure to learn, a day or two previous to our leaving Vourla, (about the 11th inst.) that the Commander in Chief was at Alexandria, in the Delaware, all well.

"The young King of Greece did me the honor to visit my ship yesterday, for two hours, and, together with his Ministry, expressed themselves highly delighted with the order and condition she is in, as well as with the kind reception given them."

PROCLAMATION.

By William L. Marcy, Governor of the State of New York.

For the purpose of rendering devout acknowledgments unto the RULER OF NATIONS, for the dispensation of His numerous favors vouchsafed to the people of this State, during the past season, I do hereby, in compliance with established usage, recommend THURSDAY, THE ELEVENTH DAY OF DECEMBER NEXT, to be observed by them as a day of Public Thanksgiving.

In witness whereof, I have subscribed my name, and affixed the privy seal of the State, this 27th day of October, 1834.

[L. S.]

W. L. MARCY.

MASSACRE.—A letter from Batavia (East Indies) dated April 23d, announces the death of Captain Philip F. Livingston, formerly an officer of the U. S. Navy, by the hand of violence, together with six other persons on board his Ship, the Matilda of Batavia, bound from that port to some other place in the East, with a cargo of salt, and $250,000 in specie belong to the Dutch government. The murderers succeeded in their object, which was to get possession of the money, and having scuttled the vessel, which soon after sunk, they landed on a neighboring shore. Captain Livingston was a son of Judge William Livingston, of Kings county,—was born at Flatbush, L. I., and was about 48 years of age. The Matilda was owned by Messrs. Payne, Sticker & Co., of Batavia.

A black frost with ice, occurred at Charleston, on the 21st instant, thus putting an end to the reign of Yellow Fever, or, as it is called there, the Stranger's Fever.

CHARLESTON, OCT. 25.—The funeral of Captain Griswold, Commandant of Castle Pinckney, on this station, took place yesterday morning, in this city, with military honors, and all the usual demonstrations of respect.

SAVANNAH, OCT. 22.—*The Weather and the Health of the City.*—Night before last, the first frost of the season occurred. For two days past, the weather has been delightful—the atmosphere clear, dry, and bracing. The Cholera which has been desolating the River Plantations has been subsided so long a time that all fears of its re-appearance are passing away. The health of our city may challenge comparison with that of any other in the Union. Indeed there has been peculiar cause for thankfulness on the part of our citizens, that although Cholera has existed in the limits of the city, the victims have been few and isolated.

[*From the Albany Evening Journal of Friday.*]

The following gentlemen were this day admitted by the Supreme Court as Counsellors and Attorneys:

Attorneys—John G. Atterbury, Daniel Baldwin, Cornelius H. Bryson, Walter Clark, William Cochran, Morris M. Davidson, Louis De Witt, Elisha Foot, Jr., James M. French, William L. Greenly, Martin Grover, Thomas M. Howell, David L. Johns, Walter B. Kellogg, Erasmus H. Marshall, Mortimer Porter, Pierpont Potter, John B. Purroy, Lyman Sanford, Wm. C. Schuyler, George G. Scott, Henry Sherman, James M. Smith, William Stuart, Robert C. Van Rensselaer, Henry D. Varrick, Horace B. Webster, Augustus Wynkoop, Jr., James J. Wynkoop, Harvey P. Yale, Halsey R. Wing, Alfred H. Corning, Edward Clark, Albert Van Holler Powell, Frederick W. Baker, J. M. Casey.

Counsellors—Benedict Bagley, N. Dane Ellingwood, Josiah W. Fairfield, Alonzo Green, Joseph C. Hart, James M'Call, P. E. Pitcher, Horatio G. Prall, Lucius Robinson, Wm. Soul, John Van Buren, Edgar S. Van Winkle, Wm. Walton, John Davis, Wm. H. Fondey.

A Tall Visiter.—We were visited yesterday, by a gentleman from North Carolina, who measures in height no less than *six feet eight inches.* He naturally excited some astonishment among our clerks, one of whom stands rather above six feet; but who, along side of the stranger, seems but a half grown boy. Our visiter stated that he has four brothers, whose aggregate height is 26 feet 3 inches.—His father measures six feet one inch. North Carolina may well boast of the tallness of her sons, especially as this specimen of growth is not the highest that may be produced, our friends having assured us that one of his neighbors measures *seven feet.* Truly, he must belong to a race of giants.—[Phil. Gazette.]

Melancholy Casualty.—Amos Richardson, Esq. a Member elect of the approaching Legislature from Bladen county, was unfortunately killed a few days since by the bursting of his gun, while in the pursuits of the chase.

[*From Neilson's Gazette of Oct. 22.*]

A fire, with a melancholy loss of life, occurred yesterday in the parish of St. Vallier, about twenty miles below Quebec. Michel Letellier, Esq., aged 87, formerly one of the members of the Assembly, was burned to death, in the house of his son, Eustache Letellier. He was in a room where a stove was lit to dry lint, and it got lit on fire by being too near the stove. In his anxiety to suppress the flames, Mr. Letellier's efforts, from his great age, were attended with the loss of his own life, having been wholly enveloped in the very combustible material. The house and most of the property was also consumed.

Emigrants to Africa.—The ship Ninus, Captain H. Parsons, sailed from Norfolk, on Sunday last, for Liberia, in Africa. She had on board 128 emigrants, 110 of whom were liberated by the late Dr. Hawes, of Rappahannock, Va. who also appropriated funds for their transportation.

With the approbation of the Parent Colonization Societiy, these go to found a new colony at Bassa Cove, about eighty miles distant from Monrovia, on the coast of that continent, whose nations are sitting in darkness, and in the region of the shadow of death. They are sent to give them the light of Christian example, and to introduce among them the arts of civilized life. This colony is to be established on strictly Christian and temperance principles.—These first emigrants to this new colony are nearly all members of the Baptist Church, and have in their number three preachers of their own colony. Twenty of them can read and write; and a goodly portion of them have valuable trades, and not one of them is superannuated. All of them seem to be above the ordinary class for vigor and intelligence.

There are also on board the ship Ninus fourteen very valuable slaves, liberated by the truly benevolent Mrs. Ann R. Page, of Frederick county, Virginia, sister of Bishop Meade. They are sent to the old colony, in order to join a number who are settled there, and who had been previously liberated and sent out by the Meade family. These are all amply provided for, having large stores of clothing, provisions and tools, and every thing necessary to render them comfortable.

There is also on board of the same ship two white gentlemen and one lady, who go out as instructors. Upon the whole, there has no expedition gone to that country better equipped, and which has fairer prospects of success than the present.

[*From the Boston Atlas.*]

FROM LISBON.—Captain Manson, of the Barque Leonidas, from Lisbon, states that every thing was quiet on the 19th September. Don Pedro's affairs in this world were nearly wound up. He was in the last stage of dropsy, and his death is daily expected.

LATER FROM EUROPE.—By the *France* from Havre, and *Henry* from London, Paris dates of 24th and London of 25th, are received.

Nothing of interest is quoted either as to French or English affairs. Spanish remain as they were; and Portuguese declining somewhat. We have no time today for long extracts.

ENGLAND.

PARLIAMENT, Sept. 25th.—In a few minutes Mr. Lee, one of the Clerks of the House of Commons, attended by about twenty gentlemen, entered the House.

The Lord Chancellor then read the Commission, issued under the Great Seal, authorizing the Commissioners to prorogue Parliament until Thursday, Oct. 23d.

The Commons then withdrew.

PORTUGAL.

[*From the Morning Post.*]

Our Lisbon letter of the 13th, comprises the occurrences deserving of notice from the 8th, the date of our last advices. Don Pedro was still alive, but pronounced beyond the possibility of recovery. He has at length been made sensible that his dissolution is at hand, and accordingly had given orders to be conveyed from the Ajudo to the Queluz Palace, the place of his birth, and when our letter was closed, was left lying in the very room in which he was born.

He had expressed a wish to perform some action which should show hereafter, that he did not depart this life at variance with his brother Don Miguel, which, it is added, his Ministers took care to prevent. The intrigues respecting the Regency were going on, the present Ministers imagining that their existence in office depends upon the Duchess de Braganza's holding the supreme power, in opposition to the Charter, which would place the Regency in the hands of the Princess Isabel Maria, who held it when Don Pedro's new Constitution was put in force.

The insurrection in the interior provinces evidently increases. The guerrila parties are strong and formidable, at the same time that the desertions and emigrations to Spain continue. The French battalion, which had revolted and fortified the barracks of Val de Perriers, has been disarmed and embarked in a Swedish ship. As we anticipated, the idea of marching an army into Spain, in aid of Queen Christiana, is abandoned. Don Pedro cannot even put down the guerrillas within the Portuguese territory.

Judging from the state of the public mind in Portugal, (and the same may be said of Spain) we deem it impossible for the Lisbon Cortes to *legislate* much longer. The members are insulted on leaving the House, and only the other day the Baron Renduff (a noted character it must be confessed) was hooted through the streets, and followed with the cry of "Thief!" The people cannot respect Don Pedro's legislators, and much less obey their mandates.

FRANCE.

PARIS, SEPTEMBER 24.—*Stock Exchange Sept. 23, half past 4 o'clock.*—The business transacted has been upon a very limited scale, in consequence of the uncertainty as to what the decision of the Procuradores will be with respect to the Spanish Loans. For cash the Funds have fallen, and for the accounts the Threes closed on Saturday, while the Fives have given way. Spanish have all declined, but the *Rentes Perpetuelles* only in a trifling degree. For cash the Fives have falled 25c.; the Threes 26c.; Cortes 1 1-8, Spanish Threes and Don Pedro's Loan 1-2; Haytian 2 fr. 50c. t Belgian have risen 1.2. For the account the Fives have declined 15c.; *Rentes Perpetuelles* 1-4; Spanish Threes 1 3-8; Neapolitan have improved 10c.

SPAIN.

The Courier Francais, affirms that Don Carlos is in a state of ill health and disagreement, arising out of fatigue, privation and disappointment, at his cause making no progress, and that his partisans are thinking of calling to Spain his eldest son, who is about seventeen years of age. Unless the insurgents can make themselves masters of some sea-port, to introduce supplies sent by their friends, or can capture the magazines or disarm the numerous corps of their adversaries, it is impossible for them to possess arms and ammunition. A serious embarrassment for the Carlists is the obstinacy of the towns in not embracing the cause of the Pretender.

GENIUS AND METHOD.

[*From a Letter of Diderot to Mlle. De Voland, published in his Memoirs.*]

At seven o'clock the company sat down to cards, and Messrs. Le Roy, Grimm, the Abbe Galiani, and I, began to converse. I must teach you to know the Abbe, whom perhaps you have looked upon merely as an agreeable man. He is something better.

A dispute arose between Grimm and Le Roy about Genius and Method, Grimm detests method: it is, according to him, the pedantry of literature. Those that can do nothing, he maintained, but arrange, had better not give themselves the trouble; those who can learn nothing but by means of arrangements had as well remain ignorant. "But," said Le Roy, "it is method which makes genius available." "And which spoils it." They said a great many things which it is not worth while mentioning to you, and they would have said a great many more had not Galiani interrupted them.

"I remember a fable, my friends, which I must tell you. It is rather long, perhaps, but it won't tire you.

"One day in the middle of a wood, there arose a dispute about singing between the nightingale and the cuckoo. Each gave the preference to his own talent. 'What bird,' said the cuckoo, 'has so simple, natural, and measured a song as I?'—'What bird,' said the nightingale, 'has a song so sweet, varied, light and briliant as mine?' 'I say few things, said the cuckoo, 'but they have weight and order, and one remembers them.' 'I am fond of talking,' said the nightingale, 'but what I say is always new, and never wearies. I enchant the woods, the cuckoo saddens them. He is so attached to his mother's lesson, that he never hazards a note he has not learned from her. I acknowledge no teacher; I laugh at

rules, and it is when I break through them that I am most admired. Where is the comparison between your dull method and my happy flights?'

"The cuckoo made many attempts to interrupt the nightingale. But nightingales sing for ever, and never listen—it is a little failing of theirs. Our friend, carried away by her ideas, ran on without minding her rival's answer.

"At last, however, they agreed to refer the matter to some arbitrator. But where were they to find an enlightened and impartial judge? They set out in search of one.

"In crossing a meadow, they fell in with an ass of the most grave and solemn aspect. Such length of ears never was seen since the creation of the species. 'Ah,' said the cuckoo, 'we are in luck. Our quarrel is an affair of the *ear*, and here is an admirable pair of them. This is the very judge we want."

"The ass was browsing, and never dreamed that he was one day to be a judge of music. But stranger things sometimes happened. Our two birds lighted beside him, complimented him on his gravity and judgment, explained the subject of their dispute, and begged him very humbly to decide it.

"But the ass, scarcely turning round his clumsy head, and continuing to browse most dilligently, made them a sign with his ears that he was hungry, and that he was not that day holding a bed of justice.—The birds insist—the ass continues to browse. At last, however, his appetite was appeased. There were some trees planted on the skirts of the meadow. 'Well,' said he, 'go there, and I will come to you. You sing and I will digest. I will listen to you, and then give you my opinion.'

"The birds take flight and perch in a tree. The ass follows them with the air and step of a chief justice. He lay down on the grass, and called to them, 'Begin; the court will hear you.'

"'My lord,' said the cuckoo, 'you must not lose a note I sing; you must seize the character of my song, and, above all, be pleased to observe its contrivance and method.' Then, drawing himself up, and clapping his wings each time, he began to sing, 'Cuckoo, cuckoo, cuckuckoo, cuckoo, cuckuckoo!' and after having combined these notes in all possible ways, he held his peace.

"The nightingale, without any preamble, began to display her voice, struck into the boldest modulations, and warbled the most singular and original strains. Her song was successively sweet, airy, brilliant, and pathetic; but it was not music for every body.

"Carried away by her enthusiasm, she would have sung longer; but the ass, who had been yawning fearfully all the while, interrupted her. 'I have no doubt,' said he, 'that all that you have been singing is very fine, but I can make nothing of it. It seems to me to be strange, confused, and incoherent. You are perhaps more learned than your rival, but he is more methodical than you; and, for my part, I am for method.'"

"'Now,' said the Abbé, addressing M. Le Roy, and pointing to Grimm with his finger, 'there is the nightingale—you are the cuckoo—and I am the ass who decides in your favor. Good night!'"

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, page 779, Vol. 2, of Railroad Journal.

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y., by
a12 tf D. K. MINOR & J. E. CHALLIS.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a 3

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, 200 do. 1¼ do. ¾ do., 40 do. 1¼ do. ½ do., 800 do. 2 do. ½ do., 800 do. 2½ do. ½ do. soon expected. *Flat Bars* in lengths of 14 to 16 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2¼, 2⅝, 2¾, 3, 3¼, 3½, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1832.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1832.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norrist. Railroad

ml 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J 15 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1832.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m26

Few more rare and delicate gems have come from the East than the following, which we find set in the *Bengal Annual.*

"Nay, jest not! woman loves not twice;
Her scenes of infancy are nought
When, yet unthrown—her *fate's* bright dice
Are trembling;—and her heart untaught
With waywardness and change is fraught.
Believe me, woman while a child
Thinks but of love as something new—
A fleeting rainbow on the wild!
The bud she is, that held no dew
Until a blossom cup it grew.
In girlhood days she loves all things
That live or bloom on heath or sward:
In *womanhood*, her being clings
To only *one*, with rapt regard,
Her light of life and great reward?
Oh! *Woman's* love, when woman grown,
Is fix'd as is the polar star;
And (childish fancies ever flown)
A crystal well, in cave of spar,
Her feelings pure and moveless are"

[From the Globe.]

By the President of the United States of America. Proclamation.

Whereas, a Convention between the Government of the United States of America, and her Majesty the Queen Regent, in the name and behalf of her Catholic Majesty, Donna Isabel the Second, was concluded and signed by their respective Plenipotentiaries, at Madrid, on the seventeenth day of February, in the year of our Lord, one thousand eight hundred and thirty-four; which Convention is word for word as follows:

Convention for the settlement of Claims between the United States of America and her Catholic Majesty.

The Government of the United States of America, and her Majesty the Queen Regent, Governess of Spain during the minority of her august daughter, her Catholic Majesty Donna Ysabel II, from a desire of adjusting by a definitive arrangement the claims preferred by each party against the other, and thus removing all grounds of disagreement, as also of strengthening the ties of friendship and good understanding which happily subsist between the two nations, have appointed for this purpose, as their respective plenipotentiaries, namely: the President of the United States, Cornelius P. Van Ness, a citizen of the said United States, and their Envoy Extraordinary and Minister Plenipotentiary near her Catholic Majesty Donna Ysabel II, and her Majesty the Queen Regent, in the name and behalf of her Catholic Majesty Majesty Donna Ysabel II, his Excellency Don Jose de Heredia, Knight Grand Cross of the Royal American Order of Ysabel the Catholic, one of her Majesty's Supreme Council of Finance, ex-Envoy Extraordinary and Minister Plenipotentiary, and President of the Royal Junta of Appeals of Credits against France; who, after having exchanged their respective full powers, have agreed upon the following articles:

ARTICLE I.

Her Majesty the Queen Regent and Governess, in the name and in behalf of her Catholic Majesty, Donna Ysabel II. engages to pay to the United States, as the balance on account of the claims aforesaid, the sum of twelve millions *vellon* in one or several inscriptions, as preferred by the Government of the United States, of perpetual rents, on the great book of the consolidated debt of Spain, bearing an interest of five per cent. per annum. Said inscription or inscriptions shall be issued in conformity with the model or form annexed to this Convention, and shall be delivered in Madrid to such person or persons as may be authorized by the Government of the United States to receive them, within four months after the exchange of the ratifications. And said inscriptions, or the proceeds thereof, shall be distributed by the Government of the United States among the claimants entitled thereto, in such manner as it may deem just and equitable.

ARTICLE II.

The interest of the aforesaid inscription or inscriptions shall be paid in Paris every six months, and the first half yearly payment is to be made six months after the exchange of the ratifications of this Convention.

ARTICLE III.

The high contracting parties, in virtue of the stipulation contained in article first, renounce, release, and cancel all claims which either may have upon the other, of whatever class, denomination, or origin they may be, from the 22d of February, one thousand eight hundred and nineteen, until the time of signing this Convention.

ARTICLE IV.

On the request of the Minister Plenipotentiary of Her Catholic Majesty at Washington, the Government of the United States will deliver to him, in six months after the exchange of the ratifications of this convention, a note or list of the claims of American citizens against the Government of Spain, specifying their amounts respectively, and three years afterwards, or sooner if possible, authentic copies of all the documents upon which they may have been founded.

ARTICLE V.

This convention shall be ratified, and the ratifications shall be exchanged, in Madrid, in six months from this time, or sooner if possible.

In witness whereof, the respective Plenipotentiaries have signed these articles, and affixed thereto their seals.

Done in Triplicate at Madrid, this seventeenth day of February, one thousand eight hundred and thirty-four. [Seal.] C. P. Van Ness, [Seal.] Jose De Heredia.

And Whereas the said Convention has been duly ratified on both parts, and the respective ratifications of the same were exchanged at Madrid, on the fourteenth day of August, one thousand eight hundred and thirty-four, by Cornelius P. Van Ness on the part of the United States, and His Excellency Don Francisco Martinez de la Rosa, on the part of Her Catholic Majesty—Now therefore be it known, that I, Andrew Jackson, President of the United States, have caused the said Convention to be made public, to the end that the same and every clause and article thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington, this first day of November, in the year of our Lord one [L. s.], thousand eight hundred and thirty-four, and of the Independence of the United States the fifty-ninth. Andrew Jckson.

By the President:
John Forsyth, *Secretary of State.*

The following is a translation of the form, or model, of the inscription:

No. —— Cupon of —— dolls. of rent payable in Paris on the — day of — 183– Cupon No. 1.	Perpetual rent of Spain. Payable in Paris at the rate of 5 per cent. per annum. Inscribed in the great book of the the consolidated debt.

This inscription is issued in pursuance of a convention concluded at Madrid on the —— day of —— 183– between her Catholic Majesty the Queen of Spain, and the United States of America, for the payment of the claims of the citizens of said States.

Inscription No. ——

Capital.	*Rent*
Dollars or Francs.	Dollars or Francs.

The bearer of this is entitled to an annual rent of —— dollars or francs, payable at Paris every six months, on the —— and —— of —— by the bankers of Spain in that city, rating each doll at 5 francs 40 centimes, in conformity with the royal decree of December 15th 1825.

Agreeably to said royal decree an appropriation of one per cent. on the nominal value of this rent is made annually at compound interest for the extinction of the same, which amount shall be employed by the above mentioned bankers in such extinction periodically at the current rate.

Madrid of 183

The Secretary of State and of the department of Finance.

The Directors of the Royal Caisse d'Amortisation.

In witness whereof we the undersigned Plenipotentiaries of Her Catholic Majesty the Queen of Spain and of the United States of America, have signed this model and have affixed thereunto our seals.

Done at Madrid this day of
[Seal.] Jose De Heredia.
[Seal.] C. P. Van Ness.

Official.

Department of State, Nov. 3d. 1834.

By the 4th article of the Convention concluded with Spain on the 17th of February last, a copy of which is published with the President's Proclamation of the 1st instant, it is stipulated that the Government of the United States will deliver to the Spanish Minister at Washington, in six months after the exchange of the ratifications, a note or list of the claims of American citizens against the Government of Spain, specifying their amounts respectively. The ratifications having been exchanged at Madrid on the 14th of August last, the term within which this list is to be furnished to the Minister will expire on the 14th day of February next. It is therefore requested that all persons having claims against the Spanish Government, which have originated since the 22d of February 1819, and before the time of signing the Convention, and which are supposed to be included in the terms of the said treaty, will send to this Department without delay, a note thereof, specifying the nature and amount of each claim, and the name of the claimant.

John Forsyth, *Sec'y of State.*

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.00—Semi-Weekly, at $4.00 in advance.

The American Railroad Journal, Weekly, at $3.00 per annum

The Mechanics' Magazine, two volumes a year, at $3.00 per annum.

The Quarterly Journal of Agriculture and Mechanics, at $5.00 per annum, or $1.25 per number.

The Family Magazine, 416 pages a year, at $1.50 in advance.

The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at $1.00 in advance, now in the 5th volume, bound volumes $1.25

The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

nov6 Ctf.

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The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers.*

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347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better ustice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications to wit:—New York Farmer and American Gardener's Magazine; Mechanics' Magazine and Register of Inventions and Improvements; American Railroad Journal and Advocate of Internal Improvements; and the New-York American, *Daily, Tri-Weekly,* and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany.* tf

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

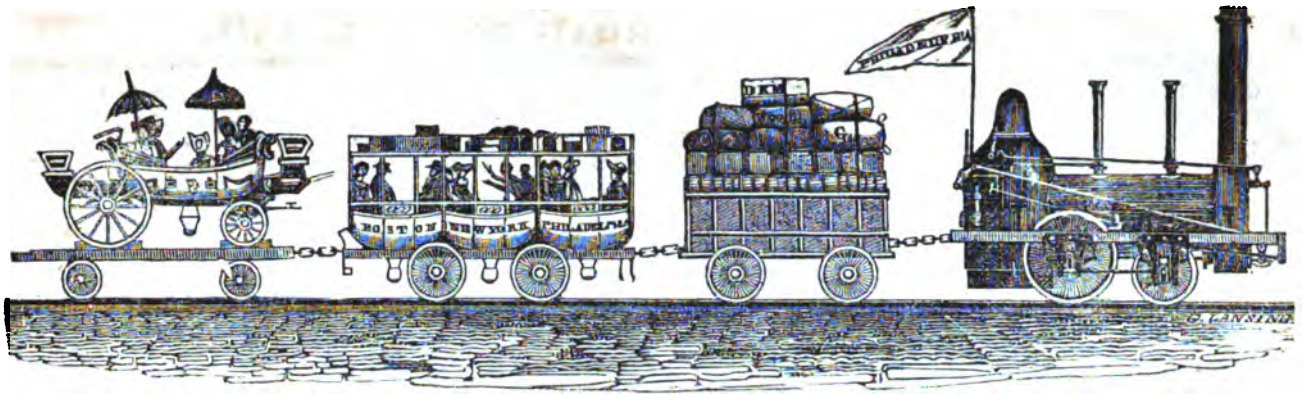
Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13-1y

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring farther information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope,* having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, EDITOR.] SATURDAY, NOVEMBER 15, 1834. [VOLUME III.—No. 45.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 15, 1834.

BALTIMORE AND OHIO RAILROAD.—We have been favored with the eighth annual report of the President and Directors, to the Stockholders, of the Baltimore and Ohio Railroad Company, from which we shall publish the report of the Chief Engineer, the Treasurer, the Superintendant of Machinery, and of Transportation.

The business, on the part completed, has materially increased since last year; and the operations on that part of the road between the Point of Rocks and Harper's Ferry have been prosecuted with great success—the road being now nearly ready for use.

The Baltimore and Washington Road is also in a great state of forwardness, and will probably be in use by the middle of the ensuing summer.

The income of the road has materially increased since last year, and it will probably be nearly doubled next year, in consequence of the extension of the road to Harper's Ferry, there to unite with the Winchester road, thereby opening a direct intercourse with the most fertile part of Virginia.

We are gratified to learn of the progress of this great work. It is the parent of most other railroads in the country; and its projectors and managers deserve well of community for their enterprise.

CHESAPEAKE AND OHIO CANAL.—We publish, in this number of the Journal, a notice of a meeting held in Maryland, for the purpose of calling a convention at Baltimore, upon the subject of the continuation of this great work. This Canal may be truly deemed a national work, and therefore it is much to be desired that measures should be taken to insure its continuation and completion. If business will permit, we shall endeavor to be in Baltimore at the time designated for the holding of the Convention.

MICHIGAN AND ILLINOIS CANAL.—We are indebted to a friend for a public document of the last Congress, containing a letter, written in December last, by General DUNCAN, then a member of Congress, Governor elect of Illinois, to Mr. MERCER, chairman of the committee on roads and canals, relative to the contemplated canal from Chicago to the Illinois river, together with Col. Gratiot's letters upon the same subject, communicating the report of H. Belin, Esq., Civil Engineer, who surveyed the route upon which Mr. Mercer's able and interesting report, accompanying them, is founded. This document contains, in about 20 pages, much valuable information, and we shall therefore lay it before our readers entire in our next number; and we bespeak for it an attentive perusal, especially by the citizens of New-York, to whom, when taken in connexion with the contemplated SHIP CANAL, around the Falls of Niagara, and another from Lake Ontario, at Oswego, to the Hudson, it is of the first importance.

There is a map accompanying this pamphlet of the entire route, and we have one also of the contemplated canal around the Falls of Niagara, which may be examined by those who desire, by calling at the office.

We have in our possession much more interesting matter relating to this grand work, which we shall lay before our readers at our earliest convenience.

Col. Long, the United States Topographical Engineer, who has been engaged in the reconnoisance of the grand route of the Atlantic and Mississippi Railroad, through the northern parts of Georgia, Alabama, Mississippi and the Western District of Tennessee, is, we learn, now engaged in viewing a central route, passing by Cotton Gin, Mississippi, and so on through this State to Savannah and Georgia. His report will be published as soon as his reconnoisances are completed. We shall embrace the earliest opportunity to lay it before our readers, or at least such part of it as may be immediately interesting.

To the Editor of the New York American :

COST OF RAILROADS.—Your correspondent W. has recently given to the public through your columns a synopsis of several Railroad articles lately published, in which the following statement appears, among others relating to the cost of American Railroads.

"The Mohawk and Hudson Railway has cost $90,000 and bids fair to cost $100,000 per mile, *before it is got* quite right."

If the estimated cost of the Long Island Railroad, as given by your correspondent should prove as erroneous as the historical statement which is here quoted, it may occasion much disappointment to the friends of that enterprize. But believing with him that such statements "if untrue and illusory should be contradicted," I take the liberty of denying the above in any part of its application to the Mohawk and Hudson Railway;—either as relates to the existing state of facts or the prospective inuendo.—Will your correspondent have the goodness to give us the authorities on which so grave a statement has been put forth? MOHAWK.

Important for the Pennsylvania Canal and Railway.—We have been credibly informed that arrangements are making in the city of New York, for organizing a company with an extensive capital, to carry trade to and from New York and Pittsburg, via the Delaware and Raritan Canal and Pennsylvania Canal and Railway.

Of the reasonableness of such a project no one can doubt. The Pennsylvania canal opens from six to eight weeks earlier, in the spring, than that of New York. Merchants in New York must either make arrangements to transport merchandize to the west on the Pennsylvania canal and railway, or they must lose the spring sales. In addition, it appears that arrangements are making for running a regular and daily line of steamboats to and from Pittsburg, next season.

The above, from the Harrisburg Reporter, contains interesting information, IF TRUE. Can any of our readers inform us whether there is any foundation for this rumor?

We learn from the English papers that the steam project *viâ* Egypt is forthwith to be put to the test under proper auspices. The Hugh Lindsay steamer is to leave Bombay on the 10th of February, and to be met at Alexandria by a branch steam vessel from Malta. The Hugh Lindsay is to remain at Suez till met by the regular Mediterranean packet from Falmouth, to be despatched March 3; and the Maltese boat set out on her return to that island between the 15th and 20th of the same month. The railroad across the Isthmus of Suez, established by Mehemet Ali, will, it is hoped greatly facilitate the success of this important plan of communication.

COLUMBIA RAILROAD, S. C.]

Report of A. A. Dexter and C. E. Detmold, Civil Engineers, to the Committee on the Preliminary Survey of the Upper Route of the Columbia Railroad—September, 1834.

(Continued from page 692.)

We would recommend the laying of longitudinal sills, or scantling, under the caps, or transverse sleepers, on all the embankments, and through the loose soil, in the excavations. A larger size of caps than that adopted on the Charleston road we should also prefer, as well as a diminishing of the distance between the supports. The arrangement may be as follows: Longitudinal sills, hewed lightwood, or heart pine timber, as a support for the caps, of length not less than 20 feet, 9 x 9. Transverse caps 9 feet long, 8 x 10, let 4 inches into the longitudinal sills, and secured by keys. On the Charleston road the transverse caps are secured to the sills by 2 inch trenails, which are objectionable from admitting water into the pin hole, and engendering decay. The transverse caps should be placed 5 feet apart, so as to give five supports to a rail of 20 feet in length, instead of four, as on the Charleston road. The rails 6 x 9 should be let 4 inches (full) into the caps, and may be secured by a dovetailed wedge to prevent the rail from raising and the key from working loose.

A mile of Road constructed on this plan would cost on an average as follows:

Clearing, grubbing, and opening tract, (*aver.*) -	$150
10,560 feet of longitudinal sills at 3 c. - -	316 80
1,056 caps—9 ft. long 8 x 10 at 4 c. per lineal ft.	380 16
Railing 6 x 9—47,520 feet at $9, - - -	427 68
Laying longitudinal sills per mile, - - -	225
Putting on caps - - - - - - -	250
Putting on rails and preparing top surface for the iron - - - - - - - - -	300
Laying down the iron, - - - - -	30
Making side drains and filling in between caps and sills, - - - - - - - - -	150
Amount, exclusive of iron, -	$2,229 64

In regard to the plan of iron, we would decidedly recommend a much heavier plate than that made use of on the Charleston road. There is no economy in the purchase of thin iron. Every day's experience shows this. The half inch iron ought never to be put on a road intended for Locomotive Engines. It was only adopted on the Charleston road from the urgent necessity of economizing in the first cost.

The great weight of the cars rolling over the thin plates, at a rapid velocity, tends to depress the bars, loosen and break off the spikes, and to produce great inequality of surface, from the sinking of the plate into the string piece below.

We believe you would ultimately find it a judicious investment of capital to purchase iron three fourths of an inch in thickness, with a large flange, or downward rectangular projection on the inner edge of the plate, of half an inch in depth from the under surface of the bar. This flange would not only prevent lateral friction between the wheel of the locomotive and the string piece, but would greatly tend to the preservation of a uniform surface, by stiffening the plate. Iron of this description would cost including spikes about $1625 per mile.

Iron five-eighths of an inch in thickness, two and a half inches wide, with a flange, as above, would be vastly superior to any of the iron plates now used in this country, and costing less than that above described, would answer the purpose of augmenting the stability, maintaining evenness of surface, and lessening the friction of the road. The thickness of the iron would allow a sufficient depth of countersink to prevent any collision between the surface of the wheel and the spike head.

We would recommend you by all means to adopt at least iron of this weight. The addition of a flange so evidently an improvement on the ordinary construction, will add but little or nothing to the cost, per ton, of the material.

The cost of a small quantity of half inch flanged iron, imported for the Charleston road, was only ten shillings per ton more in Liverpool than the ordinary iron. We think a large order for theis iron would be filled in England at the same price as that of the plain plates.

The cost of the plain plates used on the Charleston road was $46 62 per ton delivered. That of the flanged plate, $48 84 per ton. Of the iron five eighths of an inch in thickness, with a flange such as we recommend to your adoption, the number of tons in a mile would be 26—which say at fifty dollars per ton would be $1300, or $1425 including the cost of spikes.

A solid and rigid uniformity of surface is of the first importance to the successful running of the locomotives, which from their rapid motion are liable to derangement from slight impediments or inequalities in the surface, acting incessantly, and heightened by the velocity.

Light blows continually repeated fracture large masses. Hence where engines run a great distance daily, on an ordinary road, we may expect a frequent parting of axles and breakage of machinery.

In using a staunch and heavy iron plate you will not only save a great deal of expense in the supervision and repair of the road, the attention to raised bars, broken and loosened spikes, &c. but you will also save incalculably in the prevention of accidents to your locomotives, the frequent occurrence of which robs the Treasury of its revenues, and impairs the confidence of the public.

It is also necessary in forming an estimate of the probable cost, to ascertain the number of engines and cars which will be requisite in the transportation.

The distance being but 59 miles from Columbia to Branchville, and from the latter point to the head of the Plane about forty eight miles, —the whole distance from Columbia to Branchville, and back, 118 miles, may be very readily accomplished in the conveyance of the mail and passengers by two locomotives, plying each way, from the foot and head of the plane. By the present arrangement, leaving Charleston at 6 o'clock, the engines arrive at Branchville (62 miles) between half past 10 and 11 o'clock.

As the Columbia road will be probably constructed on a more substantial and perfect plan than the main track, a speed of 18 miles in the hour may be allowed, with perfect safety, and time enough permitted, leaving Columbia at 6 o'clock, to allow an arrival at Branchville in time to meet the engine from Charleston. Passengers for Charleston would remain at Branchville about one hour and a half, for the arrival of the locomotive from Hamburg, due by the present arrangement at fifteen minutes past twelve. The passengers for Columbia, both from Charleston and Hamburg, would then take passage in the locomotive at 1 o'clock, and arrive at the head of the plane, making due allowance for stoppages, at half past four o'clock, and arrive in Columbia at thirty minutes past five. The engine plying between Columbia and the foot of the plane, owing to the shortness of the route, say ten miles and a half, might almost be considered a reserve engine; and could be drawn up the plane, and used as such, when occasion required. However, it will be better to keep an extra passenger-engine on hand, to be used when repairs may be necessary to either of the other locomotives.

Supposing that the freight from Columbia may be equal to the transportation of 70,000 bales of cotton, annually, and that the exigencies of business require the conveyance of a larger part of the above in the fall and winter months,—then, if 500 bales daily leave Columbia, in 140 days, or 4⅔ months, the amount would be consumed. Making all allowances, it is not probable that more than 500 bales of cotton per diem would be sent on the railroad in the business season. One powerful freight engine of the *best construction* will readily convey this number of bales from the head of the plane to Branchville, at the rate of ten miles an hour.

Between the foot of the plane and Columbia, the engine could perform small trips daily, and the 500 bales could be taken up the plane in the morning, after the arrival of the locomotive, in 4 hours, and in time for the arrival of the same at Branchville before six o'clock. Cotton brought the day before to the foot of the plane, could be raised to the head in the evening, and depart at five o'clock A. M. for Branchville, in time for the same engine which carried it, to return to the head of the plane, with her load of up freight, which would arrive at Columbia early in the morning of the next day. By this arrangement, which it now strikes us would be the best, but 2 freight engines would be kept in constant operation,—and one spare freight engine, only, would be requisite; and we think the company may commence business with 3 freight and 3 passenger engines. However, to provide against all contingencies of accidents and press of business at particular periods, we will estimate for 4 freight, and 3 passenger locomotives, of the best English construction.

4 powerful English freight engines, of the size of the Columbia on the Charleston road, will cost, delivered in this country, - - - - - -	$24,000
3 light English passenger engines, like the Edgefield on the Charleston road, will cost, delivered, -	15,000
16 passenger carriages, at $550, - - - - -	3,300
80 freight cars made on the improved model of those now used on the Charleston road, tin roofed and proof against fire from the locomotives, fixed in springs, and capable of holding 20 bales of cotton each, will cost, made by contract and delivered to the company, $325, - - - - - - -	26,000
4 baggage cars, $250, - - - - - -	1,000
Stationary engine and fixtures for the inclined plane complete, - - - - - - - -	11,000
Duplicates of parts of the machinery of engines, tools for work-shops, &c., - - - - - -	2,500
Amount, - - - - -	$82,800

Estimate of the Total Cost of the Work.

SECTION 1.

10¼ miles in length from Columbia to the foot of the inclined plane. Graduation complete at $2,930 per mile, - - - - - - -	$30,765
10¼ miles construction at $2,229 64 per mile,	28,411 23
Probable cost of bringing the road across the present bridge into the city, - - - - - -	15,000
Fixtures at termination of horse track, and increased width of excavation, &c. - - - -	1,900
Depository at Columbia for freights - -	5,000
Engine depot, south side of river, with work-shops, &c. - - - - - - - -	3,000
1 turnout and water station with house for attendant, - - - - - - - - -	800
Crossing of the Congaree and Six Mile creeks,	1,800
Culverts, roads, and farm bridges, - - -	2,100
	$83,076 22
Add 10 per cent., - - - - - - -	8,307 62
Amount, - - - - -	$91,383 84

SECTION 2.

Inclined Plane ¾ mile.

Inclined plane with graduation and construction complete - - - - - - -	$15,000
Putting up engine house—foundation for machinery—building furnace, well, and other fixtures, including double tracks—house for attendant, &c. - - - - - - - - -	8,500
	$23,500
Add 10 per cent. for contingencies, - -	2,350
Amount, - - - - -	$25,850

SECTION 3.

From head of Inclined Plane to descent into the Cawcaw Swamp, 25¼ miles.

25¼ miles graduation complete at $2,460 per mile, - - - - - - - - -	$61,906 50
Construction of 25¼ miles at $2,229 64, -	56,255 82
4 turn outs with water stations and houses for attendants at $800, - - - - - -	3,200
Culverts, road and farm bridges, altering roads, securing fields, &c. - - - - -	1,800
Depositories, - - - - - - -	2,000
	$125,662 32
Contingencies 10 per cent. - - - -	12,566 23
Amount, - - - -	$138,228 55

SECTION 4.

From the descent into the Cawcaw to the Orangeburg road east of Orangeburg, 6¼ miles.

6¼ miles graduation at $3,500 per mile,	$22,750 00
Construction,	14,493 66
Viaduct and bridge work in the Cawcaw swamp,	5,000 00
Culverts, road and farm bridges, securing entrance into fields, &c.	1,900 00
Turnout at Orangeburg with depository building, &c.	3,500 00
	$46,942 66
Contingencies 10 per cent.	4,694 26
Amount,	$51,636 92

SECTION 5.

From the end of Section 4, near Orangeburg, to Branchville, 15 6-10 miles.

Graduation 15 6-10 miles at $1,120,	$17,472
Materials and construction of 15 6-10 miles at $2,229 64,	34,782 38
Culverts and side drains, road and farm bridges,	1,700
3 turnouts, houses, &c. with extra sideling at Branchville,	3,000
Extra for depository at Branchville,	1,500
	$58,454 38
Add 10 per cent.	5,845 43
Amount,	$64,299 81

SUMMARY OF THE COST.

Sec. 1,	$91,383 84
Sec. 2, inclined plane,	25,850 00
Sec. 3, to Cawcaw,	138,228 55
Sec. 4, to east side of Orangeburg	51,636 92
Sec. 5, to Branchville,	64,299 81
	$371,399 12
Iron and spikes for 61¼ miles of road, including turnouts, double track at plane, extension over river at Columbia, &c. at $1,525 per mile, with an allowance for transportation, &c.	93,787 50
Cost of machinery as per estimate,	82,800
Total cost,	$547,986 62

Estimate of the expense of transportation, repairs, superintendance of road, &c.

Running 2 locomotives daily on south side of plane, including allowance for wear and tear of engines, &c. at $16 daily for 312 days,	$9,984
2 do. on north side of plane at $14	8,736
Stationary engine, per diem, $16,	4,992
One general superintending engineer,	1,500
Master of work-shop,	900
Expense of work-shop, hands and materials,	8,000
20 negroes at turnouts, stations and in depositories, at $100,	2,000
50 negroes to keep the road in order, partly understanding the use of tools, $110,	5,550
2 superintendants of the above hands,	900
3 agents at depositories.	1 800
	$44,312
Add 10 per cent. for contingencies,	4,431 20
Amount,	$48,743 20
Taking the estimate of business furnished by the Committee, the down and up freight will amount to	$70,000 00
Mails to Charleston and Augusta,	10,000 00
100 passengers per week, down and up, or 10,400 passengers at $3 each,	31,200 00
	$111,200 00
Deduct annual expense	48,743 20
Nett revenue,	$62,456 80

Equal to 11 3 10 per cent. on the Capital.

We think the estimate of revenue very moderate, and judging from the receipts for up freights on the Charleston road, considerably within bounds. Way passengers and pleasure parties from Columbia to the plane will also augment the receipts. At the same time, both in our estimate of the cost of the work, and in that of the annual expense attending its operation, we have put every thing at its highest value, and made liberal allowances for all possible contingencies. A great allowance should be made for the invigorating influence given to the trade of every place by augmenting the facilities of intercourse with the sea board. We may reasonably expect that a large amount of goods for the upper Districts of Carolina, now received by way of Hamburg and Augusta, will, on the completion of the Columbia railway, find their destination through the new and more convenient channel.

Future extensions of the road into the interior, to Tennessee, and North Carolina, with the necessary consequence, a vast addition to the revenue, should not be lost sight of in estimating the profits of the enterprize.

Much could be said upon the interesting and important topic of a connexion with these fertile Northern and Western regions, whose agricultural treasures naturally seek a vent through this channel, to the sea board, but we are aware, Gentlemen, of your superior information in all that regards this subject, and of course the little necessity of further remark on our part.

With our best wishes for the full success of this enterprize, the prospects of which are in every respect so highly encouraging, we have the honor to be, with the highest respect, your most obedient servants,

ANDREW A. DEXTER,
C. E. DETMOLD.

Columbia, Sept. 12, 1834.

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To Messrs. Hart, Clarke, Blanding, Ewart, Boatwright and Wallace, Committee.

GENTLEMEN: It having been suggested to us that an estimate of the cost of the proposed railroad from Columbia to Branchville, based on the plan of Pile construction, as adopted on the Charleston and Hamburg railroad, instead of that of a superior embankment road, as estimated for in our report, would be satisfactory to the committee, we submit to you a statement showing the reduction which could be effected in the cost, should the Stockholders deem fit to adopt the Charleston road as a model. In that case even, you would have a road decidedly superior to the Charleston road, in point of permanency and stability, for your route embraces a dry and elevated region of country, free from the many swamps, morasses and ponds which abound in the other line, where the piles would reach a solid basis, to the prevention of any settling, or derangement of the superstructure.

By the plan of pile construction, the saving in the cost would be		$73,027
In the cost of iron plates, using the ¼ inch iron, instead of bars ½ inch in thickness with *a flange*, as recommended in our report,		32,100
Amount to be saved,		$105,127
Deducted from estimate as in report,		547,986
Total cost on plan of the Charleston road,		$442,859
Of the above there would be for cost of locomotive engines, cars, and machinery,	$82,800	
For depositories, crossing the Congaree, turnouts, and houses for attendants, &c.	38,200	
Iron plates ¼ x 2½,	61,687	
Inclined plane,	25,850	
		208,537
Amount for excavation and wood construction of 59 miles of road, including 10 per cent for contingencies,		234,322
Amount,		$442,859

Our reasons in favor of the plan of a permanent embankment road, with thick flanged iron plates, are given at large in the report, but yet as the proprietors may think it advisable to adopt a cheaper plan, we submit the above estimate to your consideration, fully confident that the amount is amply sufficient to cover all the expenses incidental to the full completion of the work.

We are, gentlemen, very respectfully, your obedient servants, ANDREW A. DEXTER,
C. E. DETMOLD.

Columbia, S. C., Sept. 14, 1834.

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To Messrs. Hart, Clark, Blanding, Ewart, Boatwright, and Wallace, Committee.

GENTLEMEN,—We have the honor to lay before you the result of our examinations, in a reconnoisance of the lower or Congaree river route for the proposed railroad. We can comprise this result in a few words, as it is our conviction that the route is financially impracticable and utterly inexpedient. We find that, were it practicable to pass down the valley of the Congaree, an inclined plane could not be avoided, without carrying the road along the Congaree and Santee rivers to Wilson's creek, at least 40 miles below Columbia, which would make the distance to Branchville upwards of 80 miles, or fully 70 miles to the nearest point of the Charleston railroad. But even the rise at Wilson's creek would be, in all probability, difficult for the locomotive power, and expensive in graduation. The formation of the country, however, will not permit the construction of a railroad at a practicable expense on the south side of the Congaree. We find the river bounded by a swamp, generally from ½ to 1 mile in width, subject to inundation in time of highest water from 5 to 12 feet in depth. This swamp is broken between the water courses, (lateral tributaries to the river,) by high promontories of the pine land, which extend in many points to the very margin of the stream, and are from 75 to 150 feet in elevation above the swamp. The first of these ridges is Congaree Bluff, about 11 miles below Columbia, near Slappy's lake, lying between Savannah Hunt and Sandy Run. The second ridge of importance is Bell Hall Bluff, between Sandy Run and Beaver Creek. The third is Buyke's Hill, below Big Beaver Creek. The next is Pinckney Hill, an extension of the ridge between Buyke's branch and High Hill Creek. The elevation of this Bluff immediately on the river is at least 150 feet, and a view of the high hills of Santee, near Statesburg, embracing an horizon of 30 miles in extent, is commanded from its summit. Immediately below Buckhead Creek is Bellville Bluff, of an equally commanding altitude.

Although it might be practicable to pass the railroad at the base of these bluffs without any extraordinary expense, yet to do so would necessarily throw the line so far into the intervening swamp, in passing from bluff to bluff, that a great extent of high work, occasionally through lakes, sluices, and ponds, where enormous expense would be encountered in establishing a foundation, would be absolutely necessary. To make embankments through these deeply inundated sections, would be out of the question, as, besides the expense, the points are not sufficiently frequent to afford earth for the purpose. On the other hand, if the line curves up along the high land which borders the swamps of the lateral tributaries, and crosses these streams where the flats are comparatively narrow, the irregularities and abrupt curvatures in the direction would add a double length to the line, and furnish a road scarcely practicable for locomotive use. Even did the formation on this route allow the construction of a road, there are other considerations which should weigh strongly against it in our opinion. These are, the absence of suitable timber to a great extent, the great inconvenience and expense of getting the same into the swamp, the unhealthiness of the situation endangering the lives of those engaged in the construction and after management of the work, and the difficulty of access to the road, both of persons, produce, and in the supply of fuel for the engines. In the one article of fuel, from the above cause, and its less abundance, we estimate the additional expense on this route, compared with the upper route, $10 per diem. On the whole, Gentlemen, we are fully satisfied, that further examinations and the result of experience will only serve fully to confirm in your minds the conviction of the decided superiority and eminent advantages of the route heretofore selected in the survey. Passing over a dry and elevated surface, covered with an abundance of the choicest timber, inexhaustible both for the purpose of construction and future repairs, the most direct as regards distance, the least expensive in the first cost, as well as in the annual outlay for the preservation of the road and the maintaining of the transportation, we are fully convinced that these advantages, which characterize the route selected, will be eventually ap-

preciated by every friend of the enterprise, and throw the *single* and unavoidable difficulty of an inclined plane into that comparative insignificance to which it must sink, when considered by a reflecting mind in connection with these circumstances and the great interests of the undertaking.

Respectfully submitted by your most obedient servants, ANDREW A. DEXTER, C. E. DETMOLD.

Columbia, S. C., Sept. 31, 1834.

CHESAPEAKE AND OHIO CANAL.—We are gratified to learn that efficient measures are to be taken to prosecute this important work. It is one of those works which are hereafter to serve as the bonds of the Union. We therefore wish it all possible success. Should nothing occur to prevent, we anticipate the pleasure of attending the convention.

Great Meeting in Allegany County, Maryland, October 18, 1834.—At a very large assemblage of the citizens of Allegany county, Maryland, convened at the court-house, in Cumberland, on Saturday, the 18th October, 1834, at 1 o'clock, P. M., in pursuance of public notice, to consider what measures should be adopted to hasten the completion of the Chesapeake and Ohio Canal—the court being in session, Chief Justice John Buchanan presiding, and Judges Abraham Shriver and Thos. Buchanan assisting, politely adjourned, to afford their fellow-citizens the use of the house, and a favorable opportunity of expressing their opinions and wishes on a subject so important to Maryland and her sister states. Previous to the adjournment of the court, Chief Justice Buchanan made some very eloquent and appropriate remarks commendatory of the objects of the meeting. The meeting was then organized by calling Wm. M'Mahon, Esq., to preside over it, assisted by David Shriver and Wm. Ridgely, Esquires, and appointing Thos. J. M'Kaig and James Smith to act as secretaries.

The objects of the assembly were then stated at large by B. S. Pigman, Esq., and the appointment of a Committee proposed to prepare and submit a preamble and resolutions expressive of the sense and wishes of this meeting, upon the important subjects then under consideration.

Whereupon, the following persons, to wit: B. S. Pigman, Richard Beall, S. P. Smith, Joseph Shriver, and Wm. Matthews, were appointed said Committee, and accordingly reported the following preamble and resolutions, which, after several spirited and eloquent addresses, evidencing the deep and momentous interest felt by the citizens of this and the neighboring counties in the early completion of this great national work, were severally considered and adopted with unanimity.

Whereas, it appears to this meeting, that the Governments of Virginia, Maryland, Pennsylvania, and the United States of America, considering the Chesapeake and Ohio Canal a work of National importance, as well with reference to the agriculture, manufactures, and commerce of these States, as the preservation of the Union in which we happily live, wisely accorded the wishes of very many of the most enlightened and patriotic citizens of the Nation by granting a charter to the company incorporated to execute that work, and furnishing capital to be expended thereon: And whereas, it also appears that this Canal has been successfully and well constructed by that company, from tide water, along the left bank of the Potomac, 108 miles, at the cost of about four millions of dollars, which sum is but little, if any, more than its estimated expense, and that by the construction of this work, the further distance of 75 miles, which may be done at an additional cost of about one million and a half of dollars, a line of Canal will be completed from tide water to Cumberland, in the midst of a region abounding with bituminous coal of the very best quality and inexhaustible extent, that would immediately yield, from tolls to be derived thereon, income enough to pay more than the simple interest of the whole cost of said Canal: And whereas it also appears to us, that the rapidly increasing commerce of the West, proceeding along the lakes and the valleys of the Missouri, Mississippi, and Ohio, by artificial ways to and from the Atlantic cities, will at all times, and the operations of our State and National Governments will, especially in times of war, imperiously require the use of as many avenues as can be improved, and as great facilities as can be provided for the transportation of persons and things between the western and eastern portions of this Union, and particularly along the central course of this Canal, which in its whole line will ever be free from foreign violence, and is shorter and for a greater period of the year is less obstructed by ice than any more northern work: And whereas it also appears that the value of the vast national domain beyond the Allegany mountains, and the large portion of the city of Washington, still owned by the Nation, would be greatly enhanced by facilitating and cheapening the intercourse between the West and the East; and the expenses of the United States Government, and of those who administer it, would be much diminished, by the great reduction which, so soon as this Canal shall be finished to Cumberland, will occur in the price of the fuel required and used in large and increasing quantities for the public works at Harper's Ferry and the Navy Yard, and for the public offices, hotels, and private establishments near the Capitol, all placed by the Constitution under the exclusive control, and therefore entitled to the fostering care, of the national authorities; and as in fact "no State in the Union, not one of its many markets, nor any branch of its industry, whether it speed the plough, or spread the sail, or ply at home the shuttle or the hammer, whether its activity be exerted on land or sea, to the north or south, the east or west, is without an interest in the accomplishment of this national work"—and as the funds heretofore subscribed for its accomplishment have been expended, and the completion of said work must depend upon aid being obtained from Congress, or the Governments of those States whose inhabitants are more immediately interested in its being soon finished, it seems to us proper and, to be only necessary, that a concert of action should be had to express opinions very generally entertained, and wishes long and anxiously felt by the people of several cities and states, in a manner so explicit as to entitle them to the highest and most deferential consideration by all persons in authority, and thus assure the triumph of those opinions, and the early fulfilment of our wishes. Therefore it is, by this meeting—

1. *Resolved*, That it is expedient to hold a Convention in the city of Baltimore, at 10 o'clock, A. M., on the second Monday, (the 8th day,) of December next, to be composed of three or more delegates from the towns, cities, and counties of the District of Columbia, and the several States that feel an interest in the early completion of the Chesapeake and Ohio Canal and may find it convenient to be represented therein, for the purpose of considering and adopting such measures as shall to them seem most likely to cause that Canal to be soon finished; and such other works of National character to be undertaken as may advance the welfare of Maryland and her sister States.

2. *Resolved*, That David Shriver, John Hoye, M. C. Sprigg, S. P. Smith, Moor N. Falls, Thos. J. M'Kaig, Joseph Shriver, James Smith, Thomas Perry, and Wm. Matthews, be, and the yare hereby appointed, the delegation to represent Allegany county in the aforesaid convention, with power to fill any vacancies in said delegation, or to add to its number.

3. *Resolved*, That the following gentlemen be appointed a corresponding committee, viz.: David Shriver, John Hoye, S. P. Smith, Robert Swan, J. M. Lawrence, Thos. J. McKaig, Andrew Bruce, David Lynn, John McHenry, M. C. Sprigg, Wm. McMahon, Richard Beall, B. S. Pigman, John McNeill, Jacob Snyder, Jas. M. Smith, Levi Hilleary, Geo. McCulloh, William Ridgely, George Hebb, Thomas Perry, John Piper, Ezekiel Totten, Mesheck Frost, George M. Swan, Robert Bruce, William Matthews, James Smith, James Prather, Alpheus Beall, John G. Hoffman, Normand Bruce, Joseph Shriver, Daniel Raymond, William Shaw, Samuel Charles, Perry Worthington, R. C. Hollyday, Wm. Thistle, Moor N. Falls, R. Worthington, Joseph Frantz, S. M. Semmes, Daniel Blocher, Jas. P. Carleton, Geo. W. Devecmon, Jeremiah Berry, Jr., Henry Hammil, Joseph Dilley, William Reid—and charged with the duty of publishing and communicating these proceedings to such persons as may be zealous and influential in promoting the views of this meeting, and inviting their prompt and cordial co-operation.

4. *Resolved*, That the proceedings of this meeting be forwarded for publication in the several newspapers printed in the District of Columbia, the State of Maryland, the Western portions of Virginia and Pennsylvania, and in the States of Ohio, Kentucky, Indiana, Illinois, and Missouri.

WILLIAM MCMAHON, President,
DAVID SHRIVER. } Vice Presidents.
WILLIAM RIDGELY, }
THOS. J. MCKAIG, } Secretaries.
JAMES SMITH, }

EXTRAORDINARY DESPATCH.—Extracts from the New York papers of Thursday morning, communicating the result of the election in this city, were published in the National Gazette, of Philadelphia, an evening paper, on the same day.

The United States Gazette thus relates the manner in which this despatch was effected:

The most extraordinary despatch ever forwarded in this or any other country, for so great a distance, save by telegraphic signals, was executed on Thursday. The officers of the Camden and Amboy Railroad Company, with a view to gratify the anxiety of our community in regard to the New York elections, employed one of their locomotives to bring the newspapers from Amboy, where the steamboat arrived in two hours and twenty-five minutes from New York. The locomotive proceeded to the present termination of the road, 56 miles, in 2 hours and 15 minutes, and with a horse and sulkey the remaining 5 miles were performed in 25 minutes, and at 12 minutes past 12 o'clock, the papers which left New York at 7 o'clock, were in this city. The last five miles, which are graded, will be completed within a short period, so that on any emergency, intelligence may be conveyed from city to city within five hours. It is not to be understood by any means, that this is the maximum speed practicable on this road, for it was observed by the conductor who attended the line, that he meant to run no risk, and came at a moderate rate.

The accuracy with which distances can be traversed, is shown in this instance. The speed was directed to be at the rate of 2 1-2 minutes to the mile, and the fifty-six miles were run at the rate of 2 41-100.

[*From the Philadelphia Inquirer.*]

RAILROAD RAPIDITY.—We stated on Friday that the Camden and Amboy Company had actually run the whole distance from New York to Philadelphia *in less than five hours*—being at the rate of *thirty miles an hour* for that part of the route which is between South Amboy and Camden.

This is undoubtedly one of the most striking facts connected with the progress and growth of Railroad travelling which has yet taken place in this section of the country. It shows what can be accomplished by science, rightly applied. For while it is well known that several natural disadvantages impair the speed of the Camden and Amboy Railroad machinery, besides part of the distance—that between New York and South Amboy—being water carriage, and therefore slow, in proportion, yet we see the two large cities of New York and Philadelphia now for the first time, brought within *five hours* of each other.

The whole distance by this route is ninety-four

miles, being about ten miles longer than the route by the way of Trenton.

The Camden and Amboy Company has done well, and deserves the liberal patronage of the community. Judging also from what it has accomplished, we may be permitted to imagine what greater speed may be attained, on the opening of the Trenton route, which is only eighty-four miles long, and passes through the intermediate country without the curvatures, deep cuts, elevations or water sections which necessarily impede the speed of the Camden and Amboy route. At the same rate of speed, the journey to New York by the Trenton route, may be travelled in about *two hours and three quarters*, but as the levels and directness are greater, it may be calculated on extraordinary occasions, at *two hours and ten minutes*.

This calculation may appear incredible to the public—but it will be found on a strict scrutiny to be based on mathematical accuracy. Ten years ago who would have supposed that in 1834, the distance between New York and this city would have been diminished to *five hours*? Yet so it was on Thursday.

We trust that with these facts before our public men no impediments will be allowed to prevent the opening of all routes—but particularly the shortest, and most direct, between our large commercial cities. The growing population and intercourse of New York and Philadelphia will soon demand another route of communication. One will be insufficient for the purposes of trade and commerce, and we trust that no time will be lost in providing for the construction of the Trenton route especially. The opening of the new route will not in the slightest degree affect the interests, injure the prospects, or depreciate the stock, of the Camden and Amboy Company. It will only increase the number of travellers. The Camden and Amboy Company deserve well of the public—their arrangements are on the most liberal scale—their steamboats, railroad cars and so forth, of the most commodious character.—They cannot be put down—there is no desire to injure a corporation that has conferred such important advantages upon the public; but at the same time, for the sake of fair competition and honest rivalry and general convenience, we earnestly trust that the New Jersey Legislature will act in a liberal and enlightened spirit, and sanction both routes.

FOREIGN MISCELLANY.

Village of Brock.—"Before arriving at the village, you discover an extensive piece of water, bordered by pavilions and kiosks, highly adorned. At a middling sort of inn, beyond the precincts of this sanctuary, the traveller descends, and he must consider it no small favor to procure a guide to conduct him into the interior of this elysium. It is said that both the law and the usage forbid carriages from entering the street. Besides, there is a more forcible reason, which cannot be disputed, viz., there is no street; for the little lanes which separate the domains are so narrow, that they are only practicable to pedestrians, who rarely tread on the pretty paved bricks, arranged in a sort of Mosaic work, with pebbles and shells; and a dog or a cat is seldom seen to intrude on them. It is also alleged that a law formerly existed which obliged passengers to take off their shoes before entering the street. In summer the alleys are covered with fine sand, disposed in compartments which are frequently not disturbed for a whole day, the inhabitants having but little intercourse with each other, preferring a promenade in the gardens; and when visits are paid, they have access to their neighbors by the rear of their houses—a suite of toys, one more ornamented than another, fairy canals, and bridges intersecting them at every ten yards, and serpentizing in a truly cockney taste. At every step you see new luxury. Here a house in the form of a temple, with a superstructure of painted deal, crowned with clay busts and wigs; in another dwells a retired burgomaster, who retains a painter by the year to revarnish his walls daily; a third has an iron gate to his garden, which cost 10,000 florins, and ugly in proportion; in his neighborhood a bourgeois of Amsterdam has erected two columns of Canara marble in front of a brick building on a quay at an expense of 20,000 florins. His garden exhibits three ponds, greener than his lawn, with every possible specimen of bridge. In a wooden painted pavillion is a priest in costume, with legs crossed and spectacles on nose, reading his breviary, while a fishing rod and line, suspended into the pond at his side, wait for a gudgeon. On a bare and peaked rock, a shepherd of the Alps blows his horn, without prevailing on a cow in the act of crossing a bridge, to advance one step. At the bottom of a massive grove, a villager endeavors to obtain the favors of a coy nymph, who does not appear at all moved by his addresses. A *chasseur* has been planted for twenty years, waiting orders to shoot a wild duck, stationed a few yards from the muzzle of his gun, while a group of swans regard the enemy with the utmost *sang froid!* Another amateur has varied the manner of showing his taste, and, imitating nature, has planted a number of yews; and, as they grow up, they are converted into chairs, ladders, wild boars, &c. It is difficult to retain your gravity in passing through this chaos of absurdity; especially when you are informed by the pompous proprietor, that his garden is quite in the English style! To sum up the account of this arsenal of villanous taste,—it is appreciated at its true value; for no one but a citizen of Brock has any other feeling in viewing it, but as a mass of bad taste and absurdity. In no other part of the world has so much money been expended so foolishly, yet it deserves to be seen and to be praised; for the sums daily expended in cleaning the canals, repairing the bridges and the alleys, employs a multitude of laborers. A large board is fixed on a trellis, in the most public place, containing the names of the proprietors who have neglected to make the necessary repairs; so that the defaulters are kept on the alert to avoid this species of pillory, by seldom omitting to restore any deficiency."

Anecdote of Vandyke.—"The travellers who visit the Pays Bas will find in every town collections of pictures more or less important, and *chefs d'œuvre* of the old masters in many of the village churches. The celebrated picture of 'St. Martin dividing his cloak with the Beggars' is in the small church of a village a few miles from Brussels. The history of this work is not a little interesting. Rubens, it is well known, not only recommended Vandyke to visit Italy for his improvement, but furnished him with the means, and letters of introduction. While he halted for a few days at Brussels, on his way, there happened to be a *kermess* there, into the merriment of which he entered with much spirit. At a *cabaret*, where there was a ball, he saw a beautiful country girl, with whom he danced, and became so desperately enamored of her loveliness, that he followed her home to the above village; and, contriving to scrape an acquaintance with her family, he thought of nothing else. In the mean time the funds with which his generous patron had supplied him were daily diminishing; and he found that, unless they could be re-placed, it would be necessary to abandon his Italian expedition. In this dilemma he applied to the *cure* of the village, stating that he was an historical painter, and understanding that an altar-piece was wanted for the church, he would undertake to paint one on very moderate terms The priest smiled at the stripling's pretensions to execute such a work, and put him off, saying 'there were no funds.' Vandyke, however, insisted on making the experiment, only demanding to be supplied with canvass. 'He would paint the picture,' he said, 'and leave the price to the *cure's* liberality.' Inspired, we may easily believe, by the love and romance of a young heart, the future painter of kings and courtiers instantly commenced his work, and finished it in a few weeks. The priest, though no connoisseur, could not help admiring the beautiful figure of the Saint, and sent for a friend at Brussels to judge of its merits. This person had some taste, and recommended its purchase; but the youth would neither tell his name nor fix the price of his labors. It is, however, said that he obtained for it 100 florins, (a considerable sum in these days,) and being thus again enabled to pursue his journey, he bid adieu to his dulcinea, and departed for Italy. This anecdote is given in a rare little work, 'Sketches of the Flemish Artists,' published at the Hague in 1642."

Prussian Looms.—"The pleasantest route to Aix-la-Chapelle is through Verviers, which is seated in a rich and populous valley, where the principle cloth manufactories are established. The cloth produced by their looms are finer than ours, the warp and the woof being both of the best Saxon wool; but they are much more costly, and therefore cannot be brought into competition with the English in the market. The King of Prussia, during the war, pretended to be our rival, and laid out enormous sums in establishing looms; but he soon found that, so far from exporting cloth, he could not even clothe his army. Not being willing to acknowledge his failure, he ordered the webs from Leeds to have their selvages embroidered with the Prussian eagles!"—[Gordon's Belgium.]

Bellenden Ker's New Language.—Mr. Bellenden Ker has invented a new language, which he swears is a very old tongue, called the Saxon Dutch. The truth is, it is neither very new or very old; but has been brought into notice by the Society for the Diffusion of Useful Knowledge by the rejected of Norwich, Mr. Bellender Ker, who has the honor to act as *Boots* to Lord Brougham. This *language* is merely a dialect of the Morouski, in which we used to be considered as having gained some small proficiency; and should our readers like the specimen we now put before them, we shall be happy, when we have become better known to our new allies of the Diffusion Society, to give them also an initiation into the mysteries of the tongue. The following is a specimen which Bellenden gives as a first lesson:—

"Thel orde hane el lori sah umb ugbuth eism yfri endan diamag reath unbugm yse lftoo."

Those who are quick at picking up a language will instantly be enabled to get the art of writing, if not of talking, this interesting tongue. We beg to say, that although this language is introduced by *Ker*, it has no connexion with the *Ker-ry* brogue.

Geese At Michaelmas.—The custom of eating geese at Michaelmas must have existed much longer than is generally supposed. It is said, we well know, that Queen Elizabeth was eating goose when news arrived of the destruction of the Spanish Armada, and that it has since been the custom to have a goose on the table on Michaelmas-day in commemoration of that important event: but there seems to be no real cause why that sort of poultry should be brought to our tables at Michaelmas, unless it be that geese at Michaelmas are better than at other times of the year. Our ancestors were in the habit of eating geese on Michaelmas-day as early as the fifteenth century, and that fact decides the story told of Elizabeth and the Spanish Armada. In Blount's *Ancient Tenures of Land and Jocular Customs of Manors*, there is an extract from the rolls, by which it appears that Johannes de lay Hay, in the reign of Edward the Fourth, took from Will. Barneby Lord of Lastres, in the county of Hereford, a piece or parcel of land, paying for the same 22d. per annum, and a goose (*pro prandio Domini in Festio S. Michaeli Archangeli*) fit for the Lord's dinner on Michaelmas-day.

A Laplund Beauty.—By the beginning of June, Linnæus found himself among swamps, torrents, and woods, occasionally accompanied by a Laplander as guide, and now and then incurring dangers which would have damped the ardor of a less enthusiastic traveller. On one of these occasions, after wandering a long time in a labyrinth of marshes, he was met by a woman, whom he describes as presenting a very extraordinary appearance. Her statue was very diminutive; her face of the darkest brown, from the effects of smoke; her eyes dark and sparkling; her eyebrows black; her pitchy colored hair hung loose about her head, and on it she wore a flat red cap. "O thou poor man!" quoth she, "what hard destiny can have brought the ehither, to a place never visited by any one before? This is the first time I ever beheld a stranger. Thou miserable creature! how didst thou come, and whither wilt thou go?" Linnæus entreated her to point out some way by which he might continue his journey. "Nay, man," said she, "thou hast only to go the same way back again; for the river overflows so much, it is not possible for thee to proceed further in this direction. From us thou hast no assistance to expect in the prosecution of thy journey, as my husband, who might have helped thee, is ill." The traveller begged of her something to eat, and after much difficulty procured a small cheese. He was obliged to retrace his steps through the marshes; and, when almost exhausted by hunger and fatigue, at length reached the house of a poor curate, where his wants were supplied.—[Edinburgh Cabinet Library, No. XVI. Lives of Eminent Zoologists, from Aristotle to Linnæus inclusive.]

Lesson to Married Ladies.—"A curious cause has been lately tried at Bruges, the decision of which has thrown the *femmes couvertes* of foreign countries into a panic. A Greek, married to an English woman, and established at Bruges, got into difficulties, and quitted the country without paying his debts.—His creditors sued his wife in her maiden name for the amount, and threw her into prison. A high-minded chivalrous Englishman, also living at Bruges, espoused the poor lady's cause, supposing the arrest was illegal; but, though the best counsel that the city afforded pleaded the case, it was decided against her, with costs of suit, it appearing that such is the law of Belgium, and that 'any married woman, participating in her husband's expenses, is liable to the payment of debts thus contracted; and, if insolvent, to imprisonment.'"—[Gordon's Holland.]

Fireside Enjoyments.—I dearly love what may be called fireside enjoyments. Music!—yes, it decidedly is, or ought to be, one; and a young lady employed in the exercise of that exquisite talent, for the purpose of soothing or enlivening the dear home circle, is ever an object of interest and affection. How delicious are some of our sweet ballads sung in the soft twilight—papa and mamma tranquilly listening to the well remembered notes of "The winter is past," "The Birks of Endermay," or the thrilling combination of sense and sound in the "Exile of Erin," and then blessing God for having given them an unspotted child, who, though it may be rich, and young, and beautiful, derives more delight from their approval than from the applause of the gay and brilliant.

Books!—what pleasure do they not impart? Quick—draw the curtains—the circular table a little nearer the fire; Emily, the dear little Emily, on her own particular stool at mamma's feet, her fine doll in her lap, which she is stealthily undressing, lest papa should be shocked at seeing it *en robe de nuit;* Martha, the good natured Martha, arranging some flowers in her *hortus siccus;* Rebecca, the sage, the wise young woman of the family, pondering over "The Foreign Review," or the last "Quarterly," or the sound yet laughing "Blackwood," or my especial favorite "The British Magazine!" mamma investigating the contents of a "Tidy," that newly invented receptacle of torn clothes, sighing over portions of the dilapidated wardrobe of seven children; papa turning the leaves of a musty folio, the stock-book of the household for various purposes; while Alfred, the eldest hope of the family, stretches his feet on Pompey's silky coat, and tosses over and over an aged newspaper, from which (silly fellow) he knows he can derive no information. Gentle reader!—fancy such a scene, in a country mansion, some forty or sixty miles from London, at the beginning of November; and fancy also, old Daniel, or old Joseph, or old Samuel—any old servant will do—entering with a parcel, a London parcel of books! Just fancy the delight such an event must occasion to such a party, who are all, with the exception of mamma, who has too much to think of, and Emily, who does not think at all, somewhat *bookwormish;* how charming! a parcel containing the best of Colburn's publications, for those seniors of the party who ought to know how the proceedings of the literary world are conducted; books from Westly and Davis, fit for the Sabbath and the serious; and such charming pretty looking things from Hailes and Harris, as make even Emily forget her doll. A heap of delightful annuals for those who love pretty pictures and rational amusements. How much are we indebted to them during the winter evenings, when out of doors the snow is deep, and the wind piercing!

I might say, and with truth too, that for very little masters and misses, a quiet game of blindman's buff is seasonable at Christmas time, particularly when a steady person is present to call "fire" and prevent mischief; though I almost fear that to express such an opinion is likely to bring me into disrepute with the young *élègantes*, and those smart juvenile gentlemen who come under the denomination of *little dandies*—troublesome monkies! I could better, by a thousand times, endure a good romping boy, than a mincing, finikin, perking, bowing, simpering Jemmy Jessamy, with kidded hands, perfumed handkerchief, and empty head. But I am sure all little creatures, roly-polys under eight, will forgive me, ay, and love me too, for tolerating blind man's-buff.

I am sorry that needle-work goes out of fashion, it is a gentlewomanly amusement, and ought not to be neglected, particularly by those who have many brothers and sisters, and whose parents are not rich. Many girls, I am sorry to say, despise their needle, and affect to think work unfit occupation for genteel or intellectual beings. I both grieve for, and am angry with such misses. I can tell them that many of our high-born noble ladies employ their fingers in framing clothes for the poor and desolate widows and orphans of our distressed country. And I can also tell them that the sensible and instructive Hofland, the playful and highly gifted Mitford, ay, and even the graceful and elegant Landon, think it no disgrace to ferm themselves the garbs in which they are always fascinating, because always unaffected. One advantage of the generality of female occupation is, that the mind can be engaged either in hearing or reflecting, when the fingers are employed in plain work, or even in embroidery; and nothing is more delightful than a party enlivened by alternate reading and music, where the greater number are not too fine to be industrious.—[Mrs. Hall's Chronicles of a School Room.]

[From the Mechanics' Magazine, for October.]

Seventh Annual Fair

OF THE

AMERICAN INSTITUTE,

HELD AT NIBLO'S GARDENS,

October, 1834.

It is with no ordinary satisfaction that we again bring before the notice of our readers some of the most useful and important inventions, improvements, and displays of American ingenuity and industry, exhibited at this annual fete—an exhibition in every way honorable to us as a nation, and calculated by the competition it offers, and the rewards it bestows, to render us able in a short time to vie in all our manufactures and mechanical skill with any nation on the face of the globe.

America has great reason to be proud of her numerous institutions for fostering talent and ingenuity, her seminaries of learning, and her philanthropic institutions in every section of the Union, but to none will posterity be more indebted than the institution now under our notice. It promotes a taste for the cultivation of the arts and sciences—gives a spur to industry among all classes—and has been the means of bringing into notice individuals of modest merit, who without a similar institution would have known full well

how hard it is to climb
The steep where Fame's proud temple shines afar,
——————how many a soul sublime,
Has felt the influence of malignant star—
And waged with fortune an eternal war,
Checked by the force of pride, or envy's frown,
Or poverty's unconquerable bar."

It offers, too, by its annual exhibition, by the meeting of so many of the ingenious and scientific of our land, an opportunity for the interchange of ideas, which must afford them great gratification, and when guided by those feelings of patriotism which will ever be found predominant in the breasts of men of talent, must be productive of great benefit to our country.

We are gratified to learn that the number of visitants this year quite equalled that of any former one, and we most cordially wish that this, as well as institutions of a similar nature, may "go on and prosper."—[Ed.]

LIST OF ARTICLES EXHIBITED.

Steam Engine and Sugar Mill—Cylinder, 2½ inches bore, 4½ inches stroke; walking-beam, 13½ inches long, from centre to centre; connecting rod, 13½ inches long; crank, for connecting rod, 2¼ inches long; fly wheel, 16 inches diameter; air pump next to cylinder; force pump in the centre; injection and feed cocks between the two centre standards; feed pipe from boiler to feed cock; boiler, 22 inches long, 13 inches diameter, of copper.

Spur wheel for sugar mill, 16 inches diameter; pinion, 1¾ inches diameter; 3 rollers and stands for sugar mill; rollers, 5½ inches long, 3¼ inches diameter; the driving wheels for rollers are the same diameter from the pitch line as the rollers. This mill is connected with the engine by a coupling attached to the spur wheel, which works in the pinion attached to the fly wheel of the engine.

The Draught and Model of a Ship, 420 tons, drawn by C. G. Selfridge, of Boston, representing 4 different plans of the ship. 1st, Sheer plan, which represents the ship as looking upon her broadside; shows the place for the masts, the shape of the cut-water, rudder, &c.; also, of the section lines, diagonal lines, bearding line, throat of the floors, &c. 2d, A half-breadth plan, which represents the ship upside down, shows the shape of all the water lines; main and top breadth, &c. 3d, Square body plan, representing all the square frames of the ship in their proper shape and place, with the diagonal section and water line struck upon them, also the height and length of the main transom, with the upper and lower edge of all the other transoms, struck across the frames to lay them down in the half breadth transom place. 4th, Cant body plan, representing all the forward and after frames canted into their proper places, showing the shape of all the cants, and the fashion piece, the size of all the transoms, and the place for the heels of the cants in the dead wood. Dimensions of ship—126 feet on deck, 26 feet beam, 19 feet deep.

The model was made to order, or the beam would have 28 instead of 26 feet.

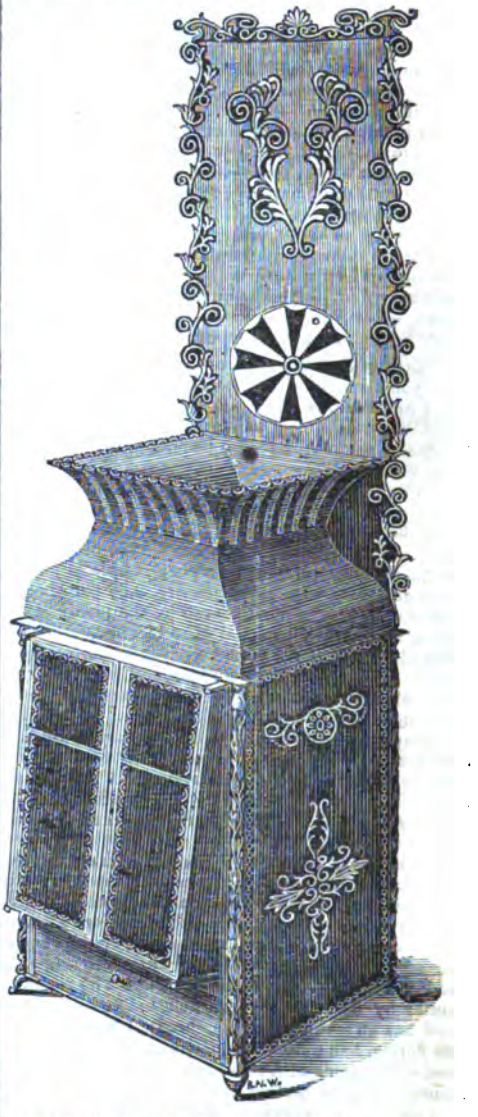
Likewise, the Model of a Steamboat, for sea, with spandings under the guards, for the double purpose of preserving the guards from the force of the sea, and making the boat more buoyant. Made by Selfridge. Dimensions—181 feet on deck, 24 ft. beam, 48 ft. from out to outside of guards, 10½ ft. deep, wheel 22 ft.

Stoves, &c.

H. Nott & Co. 1st premium on anthracite coal Hall and Cooking Stoves—a silver medal.

J. L. Mott, 2d premium for anthracite coal Cooking Stoves—a diploma.

W. Naylor, 2d premium for anthracite coal Hall Stoves—a diploma.



Naylor's Newly Invented Hot-air and Self-ventilating Stove—an entirely new article, embracing principles which the inventor has never known to be applied to any other stove; they are recommended with the greatest confidence, and warranted to perform well in every respect, or no pay demanded. Heat

can also be applied to other rooms from the same stove when required. The demand for them last year was greater than could be supplied in time, and they have undergone a very great improvement this year, both in utility and appearance, which is a farther recommendation.

J. L. Mott, 1st premium for Office Stoves—a diploma.

James Wilson, 2d premium for Office Stoves—a diploma.

N. Whitman, 1st premium for Parlor Grates—a silver medal.

Edward Smylie, 2d premium for Parlor Grates—a diploma.

B. H. Folger, for anthracite Globe Stoves—a diploma.

Platt & Treadwell, Albany, Parlor Stove for wood—a diploma.

F. Van Tassel, for a Cooking Stove—a diploma.

Joel Curtis, for a coal Cooking Stove—a diploma.

Richards & Damerel, Cooking and Office Stoves—a diploma.

H. S. & J. S. Gold, 1st premium for Portable Bake Ovens—a diploma. This oven is constructed for preventing the loss of heat, being made double, (the material of tin or other thin metal plate,) with a distance between the two of from three quarters to an inch, so that between the two casings on the top, and on all sides, there may be confined air. This construction of the oven gives it firmness and durability.

The furnace is in the centre, between the doors or ends of the oven, passes through it, is put in at the top, and projects a little below the bottom. The fuel is put in at the top, which has a cover, (as represented in the first cut;) the draught enters (as represented in the same cut) in front, just under the bottom. The sides of the furnace are represented in the second cut, by the two lines near the centre. The circle represents the smoke or gage pipe, which ascends behind the oven. The furnace is about two inches thick, is nearly as wide as the oven, so that it divides it into two parts: it holds about eight quarts of coal, which is sufficient to bake at least *thirty-two loaves* of bread. To prevent the heat from operating unequally, there is a contrivance introduced for regulating the heat, by producing what is called by the inventor, "the circulation of heated air." Those several pieces running parallel with the furnace, and near it, represent a *vertical partition*, in so many pieces. The air between this partition and the furnace becomes immediately heated; it then rises, of course; and as each piece of the partition is set back towards the furnace a proportionable distance, (as is seen in the cut,) the heated air will enter between the several shelves and pass towards the door over the articles on one shelf and under those on the other, by which the heat will be absorbed, so that the air will become cooler when it reaches the door, where, by preponderance, it will ascend through the space (represented in the cut) to the bottom, when it will be re-heated, and so on. This contrivance for producing circulation has never before been known, and from this the oven derives its chief advantage, as it will operate equally well, though several stories high. In this oven the lower shelf is made double, containing confined air. This prevents what is on the shelf from being burned at the bottom. It is made thicker the front side next to the door, so that its under side may be an inclined plane. The furnace is round, and is located under this shelf, entirely in the oven, except the part which catches the ashes. The partition in this is the same as in the other. It will be seen that the heated air must be carried to the back side of the oven, where it will ascend as in the other, and the operation will be the same.

Fig. 26.

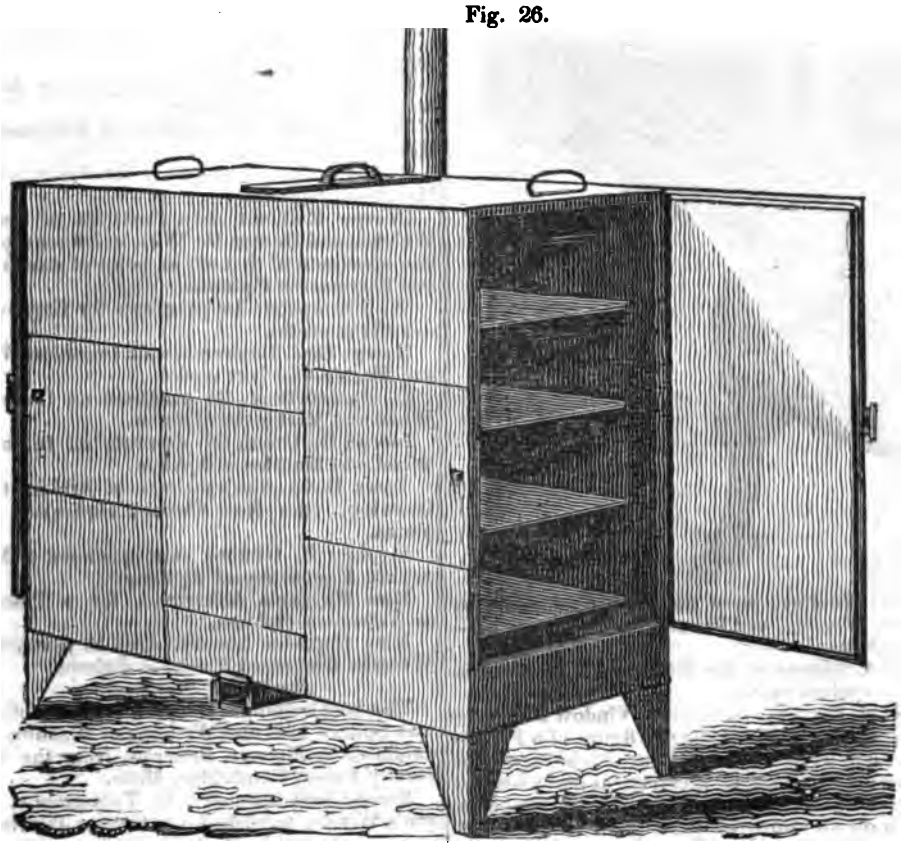


Fig. 2.

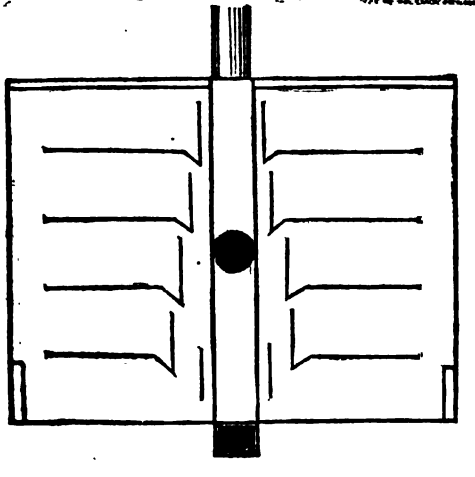
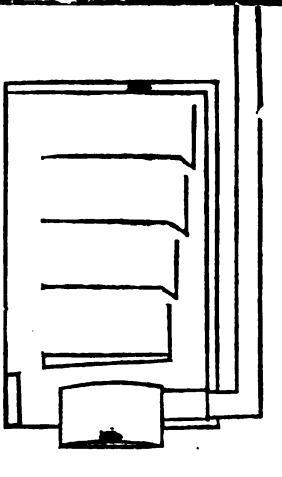
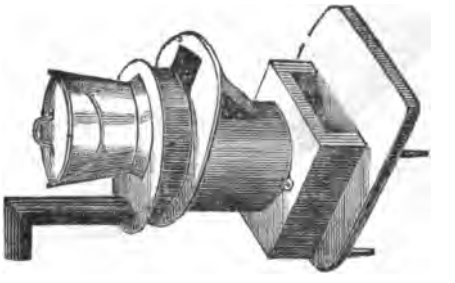


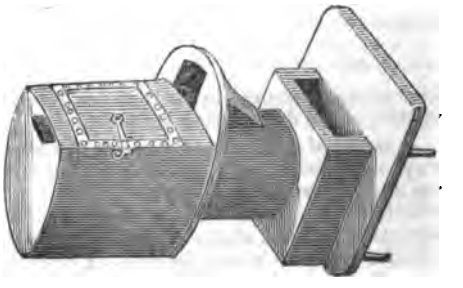
Fig. 3.



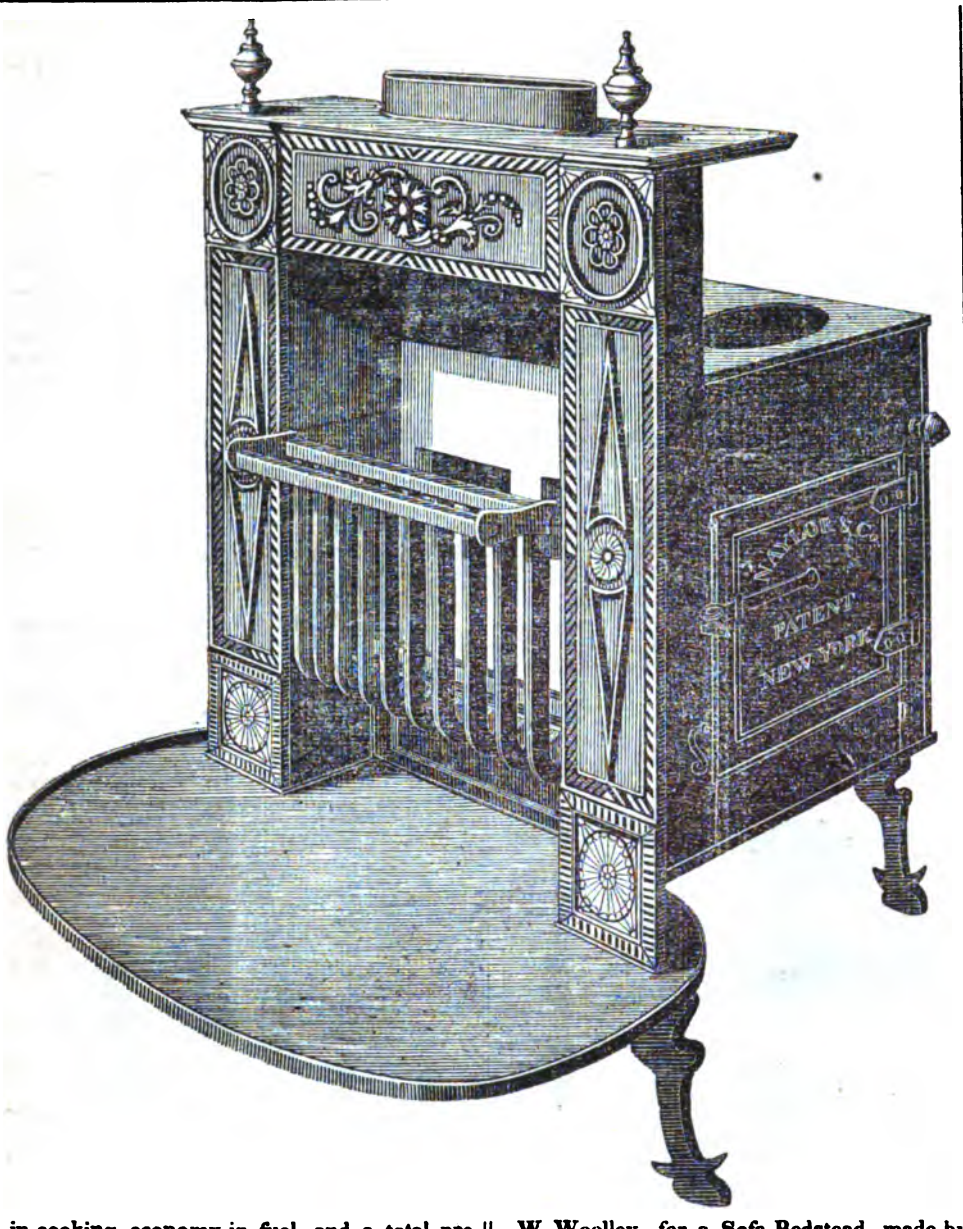
H. Nott & Co., 2d premium for Portable Bake Ovens—a diploma.

Graham's Stove,—as represented by the subjoined cuts. We have before us several testimonials from persons who have had it in use some time, who all concur in stating that it fully answers their expectations. It is cheap—simple in its construction—neat in its appearance—and economical as to the quantity of fuel consumed.





Naylor's Coal Cooking Stove, acknowledged the best article of the kind ever brought into the market. The demand having been extensive, and the improvements great this year, will be a further recommendation to it. The improvements are a greater increase and equalization of heat to the boilers, a greater facility



in cooking, economy in fuel, and a total preventive of the dust arising from coal.

A Model of a Cooking Stove, invented by Dr. Payne, 13 Beekman st., New-York; quite novel in its operation. The grate, or furnace, in which the wood, or coal, is burned, turns horizontally under a shallow heat chamber, of a circular form, on which the cooking vessels are placed, which enables the cook to put the most intense heat under the vessel, or vessels, that most require it, the burning surface of the fuel coming in immediate contact with the bottom of the vessels, whilst the heated air from the furnace, or grate, by an ingenious and compact arrangement, passes from the furnace under all the vessels, in a circle, before it escapes into the stove pipe, which is placed in the centre of the circle. The range, or grate, is so constructed as to afford ample and convenient room for roasting and broiling, without occupying a space more than 3 feet square. The stove may stand on legs, or be suspended.

Cabinet Ware.

J. C. Jenckes, a Carriage Chair for an Invalid—a diploma. A very ingenious contrivance, by which sick persons are able to move themselves from room to room, and also alter their position of sitting.

A splendid Perspective Pier Table, inlaid with upwards of one hundred and fifty pieces of wood of different shades and colors, so arranged as to appear like solid blocks or boxes, in whatever position you may stand to view it; manufactured by Wm. Fulcher, No. 88 Elm street, New-York.

W. Woolley, for a Sofa Bedstead, made by E. S. Woolley, and Frieze Window Covering—a diploma.

J. A. Patterson, fine inlaid top for Centre Table—a silver medal.

J. H. Farrand, for Spring Window Blinds—a diploma. Mr. F. exhibited a figure of a Pagoda or Temple, made in the form of a hexagon—as a model intended to illustrate at one view, by revolving on its centre, blinds for windows, both on an improved principle, and of original invention, and classed under the following heads:

Inside spring blinds, adapted either for linen, transparencies, maps, &c.;

Sun shades for outside, made to suit different forms of windows, which effectually screen the rays of the sun, and ventilate the rooms in hot weather;

Dwarf Venetian blinds, with vertical movement, striped Venetian and falling hood;

The painted Venetian blind differs from the old plan, inasmuch as it has an extra lath revolving on two rollers, centred in the top lath, which hangs in a horizontal position, thereby preventing the line either to cut or slip from the pullies, which being vertical to the holes in the slats facilitate the turning of the blind, besides effectually screening the rays of light.

Fine Arts.

Original Busts of McDonald Clark, the poet, and a Dead Infant, both sculptured by James V. Stout—silver medal.

These busts are stood on pedestals of the Scagliola marble, and are manufactured by Clark & Dougherty, 40 Hamersley street. They are, in point of strength, durability, richness of tint, vein and polish, fac similes of their originals, and what greatly enhances their value is the barrenness of the primitive quarries, among which are the lapis lazula, roseæ broceido, yellow antique, &c., and the cost is from one-sixth to one-third of their models.

J. W. Dodge, 1st premium for Miniature Painting—a diploma.

J. James, 1st premium for Stained and Burnt Glass—a diploma.

Smith & Crane, 1st premium for Wood Carving—a diploma.

Mrs. Springsteel, 1st premium for frosted embossed Flower Work—a silver medal.

Miss Harris, 1st premium for Shell Flower Work—a silver medal.

W. J. Hubard, 1st premium for Portrait Painting—a diploma.

Edward D. Marchant, 2d premium for Portrait Painting—a diploma.

J. W. Hill, 1st premium for water colored Landscape and Marine Painting—a diploma.

Miss E. Johnson, 2d premium for water colored Landscape Painting—a diploma.

T. Chambers, 2d premium for water colored Marine Painting—a diploma.

Noel Delregney, 1s premium for Oil Landscape Painting—a diploma.

Hyatt & Smith, 2d premium for Oil Landscape Painting—a diploma.

W. Eagleson, 1st premium for Sculpture in Marble—a diploma.

R. J. Brown, 2d premium for Sculpture in Marble—a diploma.

George Endicott, two Portraits of Daniel Webster and Doctor De Witt, in Lithograph, a fine specimen of that art in point of execution and likeness—a diploma.

W. Thompson, 1st premium for Engraving—a silver medal.

George Bird, 1st premium on Imitation Wood and Marble—a silver medal.

E. Ramsbottom, 2d premium on Imitation Wood and Marble—a diploma.

Joseph De Groot, 2d premium on Imitation Wood and Marble—a diploma.

Town Davis, fine specimen of Architectural Drawing, (the New Custom-House)—a diploma.

Stephen H. Gimber, fine specimen of Mezzotinto Engraving—a diploma.

Miss Margaret Ackerman, for a Painting on Velvet—a diploma.

Miss Cornelia Loomis, aged 13 years, for 2 Wreaths Embossed Work—a diploma.

Books and Stationary.

The best specimen of Typography exhibited was Sparks' Life and Writings of Washington, exhibited by Monson Bancroft, from the University Press, Cambridge, Mass.

Second best specimen of Typography, Byron's Works, published by George Dearborn, elegantly bound by H. & H. Griffin.

Best specimen of Blank Account Books, exhibited by Wm. Minns; the ruling very neat and perfect, and the binding, particularly of two volumes, highly finished and in good style.

Second best specimen of Blank Books, by D. Felt & Co., four very elegant specimens, as to ruling and binding.

Best specimen of Book Binding; Books of Common Prayer, bound by L. Turner.

Second best specimen of Book Binding, by H. & H. Griffin.

Best specimen of Sealing Wax; a great variety of beautiful samples, plain and variegated colors, by D. Felt & Co.

Best specimen of Manufactured Quills, by D. Felt & Co.

Best specimen of Maps, by Mitchell, Philadelphia.

Second best specimen of Maps, by D. H. Burr, N. Y.; a large and elegant Map of the State of New-York, with Plans of the cities and most important towns in the State.

The following articles were worthy of particular notice:

The National Portrait Gallery, published by M. Bancroft, press of Wm. Van Norden. Although it may be thought that this work falls more immediately under the department of the Fine Arts, this committee cannot omit to notice, with high approbation, the style of its execution, which is highly creditable to the publishers, and a favorable specimen of the progress of the arts in this country.

Book of Common Prayer, published by R. Bartlett & S. Raynor, press of Wm. Van Norden, a very neat and beautiful edition.

Mitchell's Reference and Distance Map of the United States, exhibited by C. Mould, agent, 155 Broadway, is a work which merits particular notice for its correct and handsome execution, and minuteness and variety of detail. It is accompanied by a volume (324 pages) of explanatory references, containing also a mass of important topographical and statistical information.

A fine specimen of Portable Writing Desk and Dressing Case, by Thomas Luff & Co.

Very superior Binders' and Paste Boards, by J. B. Cheeseman.

Music and Musical Instruments.

Rosewood Cabinet Piano Forte, No. 401, 6 octaves, with patent piccolo action, and cylinder fall, manufactured by Firth & Hall, No. 1 Franklin square. Silver medal.

One 8 keyed silver banded cocoawood flute, with patent roller springs, elastic cushion keys, and C & C silver plates;

Also, one 8 keyed silver banded cocoawood flute, with elastic cushion keys, common springs, C & C silver plates. Both the flutes manufactured as above.

Two Piano Fortes, by John Osborne. The only difference in the two musical instruments is, the one is what is called by makers French Grand Action, and the other English Grand Action. The above names are given them by way of classification or designation, as they are, in part, copied from those two nations, in their original mode of mechanism. Gold medal.

Bridgland & Jardine, 2d premium on Square Piano Forte—a silver medal.

Bridgland & Jardine, 2d premium on Cabinet Work, rose-wood Piano Forte Cases—diploma.

C. H. Eisenbrant, Baltimore, 1st premium on Flutes and Clarionets—a silver medal.

Rounberg & Schroeder, 2d premium on Flutes and Clarionets—a diploma.

C. G. Christman, for workmanship for an improved Flute—a diploma.

C. A. Eisenbrant, for a Brass Horn—a diploma.

G. Godene, for double Bass Viol—a diploma.

India Rubber Goods.

Captain L. Norcross' Water Dress—composed of a lead cap, which encloses the head, of 75 lbs. weight, and one foot in diameter, with a small glass in front, for the object of vision. The lower part has an opening, the edges of which rest on the shoulders and front and back of the chest equally.

The dress is made entire of India rubber cloth, with arms, gloves, legs, and feet, and made to fit loose. The end that joins to the lower part of the cap or helmet is made like the mouth of a bag. The operator draws it on whole, and then the upper part, or mouth, is tied close around the lower edge of the cap. Weights of lead are attached to the feet, of ten pounds each. From the top of the helmet there is a pipe as long as, or longer than, the water is deep, which the operator is going to work in, attached to an air pump. This is the air refreshing, or supply pipe; another pipe, from the helmet to the top of the water, is the discharge pipe. In the latter, there is a flat portion, about 6 inches long, made by stitching two flat pieces of sole leather together on the edges, situated about 6 inches from the helmet, and this constitutes the safety valve. On this valve, the pressure of the water acts so as to prevent the escape of air from the dress, till the air, surrounding the body from the fingers to the toes, is more dense than the water, then a proper portion of the air escapes through the valve, and goes up to the surface, along the discharge tube.

Boston and Lynn India Rubber Company, 1st premium for India Rubber Goods—a silver medal. C. C. Nichols, 33 Fulton street, agent.

Also, from the India Rubber Factory, Roxbury, Mass. (warranted water and air tight)—

Ladies' India Rubber Camlet Cloaks; Gentlemen's Drab Pantaloons and Surtouts; Life Preservers; Silk Air Cushion; Ladies' Prunelle Shoes—a diploma. H. A. Winslow, 66 Maiden lane, agent.

Carriages, &c.

Isaac Mix & Sons, a very handsome Stanhope, with improvements in manner of putting on tires, worthy of particular notice; the rundle behind is well arranged for servant, or can be closed at pleasure—a silver medal.

Isaac Mix and Sons, one carriage, turn-over seat Stanhope, a well made and convenient article for a family. A diploma.

I. Cooke & Sons, one double seat Phæton. This carriage is so constructed that it can be used as a barouche, with a top to close all round, or as a double seat Phæton; by taking off the driver's seat and turning the front seat to face the horses, the top can be thrown down or removed at pleasure. A silver medal.

I. Cooke & Sons, a very handsome Buggy Waggon—a diploma.

Peter L. Donaldson, Newark, N. J., for Gig Axles—a diploma.

Gold, Silver, Plate, Jewelry, &c.

Mullen & Ackerman, for specimens of filagree jewelry—a diploma. W. J. Mullen, of the same firm, has been awarded a medal for two gold watch dials. Mr. M. deserves great credit for the perfection to which he has brought the American manufacture of this article. He was the first in this country to attempt their preparation, and now executes them in a style equal to any that can be imported.

James Thompson, 2d premium for Silver Pitchers—a silver medal.

Richards, 1st premium on Patent Spring Gold Spectacles—a diploma.

Robinson, Jones & Co., 1st premium for plain and fine gilt chased and fancy buttons—a silver medal. Attwater, Parker & Wilson, No. 8 Platt street, agents.

Ackerman's Lithometallic, or Jewel-pointed Pen, is a gold pen, with points made of a valuable jewel, and one of its peculiar advantages is that it cannot be corroded by ink, and may be used a long time without being at all injured or impaired by use.

After a little experience, a good writer will prefer it to the steel pen, as the ink flows more freely, and his hand-writing will be uniformly the same, and resemble more that of the quill pen. It is made portable for the pocket, and will be found, to persons travelling, a very useful and convenient article.

We defer (at the request of Mr. Williamson, the inventor,) giving a description of the newly invented graduating silver steel pen, which received the premium of a gold medal.

Marquand & Co., 1st premium for Silver Pitchers, Spoons, and Forks—a silver medal.

Jared L. Moore, for fine specimen of Gold and Silver Spectacles.

Leather, Boots, Shoes, &c.

Sherill & Reed, Salisbury Centre, Herkimer county, 1st premium for hemlock tanned Sole Leather—a diploma. Thomas Brooks & Sons, agents, No. 60 Vesey street.

Quackenboss, Wynkoop & Co., 2d premium for hemlock tanned Sole Leather—a diploma.

W. Leek, 1st premium for oak tanned Sole Leather—a diploma. Isaac Bullard, agent.

F. K. Boughton, Utica, 1st premium for Otter and Seal Skin Caps—a diploma. For sale at 168 Water street.

J. W. Brodie, 1st premium for dressed Otter Skins—a diploma.

J. D. Williams, 1st premium on dressed Muskrat Skins—a diploma.

S. C. Smith, fine specimen of lined India Rubber Shoes—a diploma.

J. G. Vandenburg, 33 Wall street, fine specimen of water proof Gum Elastic Boots—a diploma.

T. Lane & Son, 1st premium for Ladies' Boot and Dress Slippers—a diploma.

Alexander Clark, 1st premium on Gentlemen's Calf Skin Boots—a diploma.

Cloths, Cassimeres, &c.

Denny Manufacturing Company, Oxford, Mass., 1st premium for superfine black and blue Cloths—a gold medal. Steele, Wolcott & Co., 62 Pine street, agents.

Middlesex Company, Lowell, Mass., 2d premium for superfine black Cloth—a silver medal. Steele, Wolcott & Co. 62 Pine st., agents.

Wethered & Brothers, Baltimore, 2d premium for superfine blue Cloths—a diploma. Steele, Wolcott & Co., 62 Pine street, agents.

Daniel Buck, Lawville, Lewis county, N. Y., 1st premium for American Saxony Wool—a diploma. Steele, Wolcott & Co., 62 Pine st., agents.

Wethered & Brothers, Baltimore, 1st premium for black Cassimeres—a silver medal. Steele, Wolcott & Co., Pine street, agents.

Middlesex Company, Lowell, Mass., 2d premium for black Cassimeres—a diploma. Steele, Wolcott & Co., 62 Pine street, agents.

Dick & Sanford, Newtown, Conn., 1st premium for Satinets—a diploma. Charles N. Mills, 44 Pine street, agent.

John Wilde & Co., Bloomfield, N. J., 1st premium for White Flannels—a silver medal. J. Wilde, No. 12 Gold street, New-York.

A. Robinson, Fall River, Mass., 1st premium for Prints—a gold medal. Brown, Brothers & Co., 63 Pine street, agents.

Louisdale Company, R. I., 1st premium for Nankeens—a diploma. Lawrence & Trimble, 51 Pine street, agents.

Paul M. P. Durando, 1st premium for Boys' Clothing—a diploma.

Horne, Shepard & Fisher, a piece of Bleached Cotton Flannel—a diploma. L. Holbrook & Co., 53 Pine street, agents.

Premiums or diplomas were also awarded for the following:

Wm. T. Willard, for Covering for Vault Grate—a diploma.

John Woolley, 1st premium for Roofing—a diploma.

E. B. Sweet, 2d premium for Roofing—a diploma.

Peck & Lannuier, 1st premium for Beaver Hats—a diploma.

A. & A. Bancker, 2d premium for Beaver Hats—a diploma.

J. M. Henderson, 1st premium for Silk Hats—a diploma.

Hyatt & Smith, 1st premium for Sign Painting—a diploma.

John M. Brown, 2d premium for Ornamental Sign Painting—a diploma.

J. F. Hanks, 1st premium for Ornamental Sign Painting—a diploma.

Judah A. Lee, 1st premium for Plain and Ornamental Penmanship—a diploma.

S. Andrews & Co., Perth Amboy, 1st premium for Combination Lock, invented by S. Andrews—a silver medal.

J. G. Pierson & Brothers, 1st premium for Wood Screws—a diploma.

T. & B. Rowland, Philadelphia, 1st premium for Mill Cross-Cut and Pit Saws and Shovels and Spades—a silver medal. Edward Field, No. 1 Platt street, agent.

Lewis McKee & Co., Plymouth, Conn., 1st premium for Chest and Cabinet Locks—a diploma. Atwell, Baker & Wilson, agents, No. 3 Platt st.

W. Hunt & Co., Douglass, Mass., 1st premium for Axes and Hatchets—a diploma. Agents, Hubbard and Casey, No. 48 Exchange Place.

Johnson & Co., 1st premium for Cosmetics, Fancy Soap and Perfumery—a diploma.

O. S. Williams, 1st premium for Travelling Trunk—a diploma.

R. R. Chamber, 2d premium for Travelling Trunk—a diploma.

(To be continued.)

NEW-YORK AMERICAN.

NOVEMBER 8—14, 1834.

LITERARY NOTICES.

MEMOIRS OF THE LIFE AND CORRESPONDENCE OF HANNAH MOORE; by WM. ROBERTS. 2 vols. New York: *Harper & Brothers.*—We hastily mentioned these volumes last week, and have since looked into them with much interest; though to say truth, there is something too much of them.

The great charm of them is the collection of letters from conspicuous persons, with whom, during a period of nearly sixty years, *Hannah Moore* lived on terms of great familiarity and friendship. These present a lively and striking view of the times: they are full of anecdote, nay gossip; and on that very account, as viewed in contrast with the character, —in later life almost ascetic,—of the lady, and with that of her literary labors,—are the more striking.

Garrick, Johnson, Walpole, Burke, of a past age, with Wilberforce and all his virtuous associates of our day, constitute a few of the bright names that grace these pages.

We have heretofore made extracts from these volumes. We now add a few more; and first from Garrick's sprightly pen.

Essex, July 9, 1777.

MY DEAREST OF HANNAHS.—You must have thought me lost, mad, or dead, that I have not sent you a morsel of affection for some time. I have an excuse, if there can be any for the neglect of such a friend! We are now with Mr. Rigby and some ladies, our particular friends, by the sea-side; and while I am writing this in my dressing room, I see no less than fifty vessels under sail, and one, half an hour ago, saluted us with thirteen guns Among all the news, foreign and domestic, that travel through and about Bristol, have you not heard that *Mrs. Garrick and I were separated?* Tell the truth, dear Nine, and shame you know whom. To our very great surprize, a great friend of ours came from London; and to his greater surprise, found us laughing over our tea under our walnut-tree; he took me aside, and told me it was all over the town, from Hyde Park corner to White chapel dunghill, that I had parted with Mrs. Garrick. You may easily suppose this was great matter of mirth to us. We imagined somebody had had a mind to joke with our friend, but upon inquiry we found that such a report had been spread; but, to comfort your heart, be assured that we are still as much united as ever, and are both so well, that there is a prospect of dragging on our clogs for some years to come. Colman is preparing his comedy of four acts, called the "*Suicide,*" a very dangerous subject, but the actors say it must have great success.

My theatrical curiosity diminishes daily, and my vanity as an author, is quite extinct; though by the by, I have written a copy of verses to Mr. Baldwin, the member for Shropshire, upon his attack upon me in the House of Commons. He complained that a celebrated gentleman was admitted into the house when every body else was excluded, and *that I gloried in my situation.* Upon these last words my muse has taken flight, and with success. I have described the different speakers, and, it is said, well, and strong, and true. I read them to Lord North, Lord Gower, Lord Weymouth, Mr. Rigby, &c., and they were all pleased. If I have time before I am obliged to send away this long letter, you shall have the first copy, though you must take care not to suffer them to go from your own hands. I have, upon my word, given them to nobody. Burke and Mr. Townshend behaved nobly upon the occasion. The whole house groaned at poor Baldwin, who is reckoned, *par excellence*, the dullest man in it; and a question was going to be put, to give me an exclusive privilege to go in whenever I pleased. In short, I am a much greater man than I thought.

Whenever I receive your story I shall con it over most unmercifully. My wife this moment tells me that I must send you a double portion of her love; and she has added, that if the vinegar is but half as sharp as your pen, or as your temper is sweet, she shall be most thankful for it. There is German wit for you. I shall deliver the overflowings of your heart to her in all the purity of affection. We are going to Lady Spencer's, for ten days, in half an hour. Our loves to all about you.

Most affectionately and faithfully yours,

D. GARRICK.

Adelphi, Oct. 17, 1777.

Shame! shame! shame!

You may well so, my dear madam; but indeed I have been so disagreeably entertained with the gout running all about me, from head to heel, that I have been unfit for the duties of friendship, and very often for those which a good husband, and a good friend, should never fail performing. I must gallop over this small piece of paper; it was the first I snatched up, to tell you that my wife has your letter, and thinks it a fine one and a sweet one.

I was at court to-day, and such work they made with me, from the Archbishop of Canterbury to the Page of the Back Stairs, that I have been suffocated with compliments. We have wanted you at some of our private hours. Where's the Nine? we want the Nine! Silent was every muse.

Cambridge said yesterday, in a large company at the Bishop of Durham's, where I dined, that your ode to my house-dog was a very witty production; and he thought there was nothing to be altered or amended except in the last stanza, which he thought the only weak one. I am afraid that you asked me to do something for you about the parliament; which, in my multitude of matters, was overlooked; pray, if it is of consequence, let me know it again, and you may be assured of the intelligence you want.

The last new tragedy, "*Semiramis,*" has, though a bare translation, met with great success. The prologue is a bad one, as you may read in the papers by the author; the epilogue is grave, but a sweet pretty elegant morsel, by Mr. Sheridan; it had deservedly great success. Mr. Mason's Caractacus is not crowded, but the men of taste, and classical men, admire it much. Mrs. Garrick sends a large parcel of love to you all. I send mine in the same bundle. Pray write soon, and forgive me all my delinquincies. I really have no time to read over my scrawl, so pray decipher ner, and excuse me. Ever yours, most affectionately, D. GARRICK.

HANNAH MOORE was excessively anxious for the establishment of religious schools. The following letter shows some of the difficulties she met with.

"I was told we should meet with great opposition if I did not try to propitiate the chief despot of the village, who is very rich and very brutal; so I ventured to the den of this monster, in a country as savage as himself, near Bridgewater. He begged I would not think of bringing any religion into the country; it was the worst thing in the world for the poor, for it made them lazy and useless. In vain I represented to him, that they would be more industrious as they were better principled; and that, for my own part, I had no selfish views in what I was doing. He gave me to understand, that he knew the world too well to believe either the one or the other. Somewhat dismayed to find that my success bore no proportion to my submissions, I was almost discouraged from more visits; but I found that friends must be secured at all events, for if these rich savages set their faces against us, and influenced the poor people, I saw that nothing but hostilities would ensue; so I made eleven of these agreeable visits; and as I improved in the art of canvassing, had better success. Miss Wilberforce would have been shocked, had she seen the petty tyrants whose insolence I stroked and tamed, the ugly children I praised, the pointers and spaniels I caressed, the cider I commended, and the wine I swallowed. After these irresistible flatteries, I inquired of each if he could recommend me to a house; and said that I had a little plan which I hoped would secure their orchards from being robbed, their rabbits from being shot, their game from being stolen, and which might lower the poor-rates. If effect be the best proof of eloquence, then mine was a good speech; for I gained at length the hearty concurrence of the whole people, and their promise to discourage or favor the poor in proportion as they were attentive or negligent in sending their children. Patty, who is with me, says she has good hope that the hearts of some of these rich poor wretches may be touched: they are as ignorant as the beasts that perish, intoxicated every day before dinner, and plunged in such vices as make me begin to think London a virtuous place."

This passage was written in 1789. Thirty-four years elapsed, and she was among the scorners of the Schoolmaster. The age had outgrown her.

"Our poor are now to be made scholars and philosophers. I am not the champion of ignorance; but I own I am alarmed at the violence of the contrast. Even our excellent C——— seems to me to refine too much; but my friend F——— is an Ultra of the first magnitude. The poor must not only read English, but ancient history, and the sciences are to be laid open to them. Now, not to inquire where would they get the money, I ask, where would a laboring man get the time? Time is the fortune of a poor man; and as to what they would gain from Grecian history,—why, they would learn that the meanest citizen of Athens could determine on the merits of a tragedy of Euripides; to do which, they must always live in a playhouse, as indeed they almost always did; they were such critics in language as to detect a foreign accent in a great philosopher, &c.; and yet history does not speak of a more turbulet, unmanageable, profligate people. * * *

If you are not quite tired of me and my senilities, I will proceed to a few facts to illustrate my theory. Not only in the great national schools, but in the little paltry cottage seminaries of threepence a week, I hear of the most ridiculous instances of the affectation of *literature.* A poor little girl of this stamp was in my room one day when a gentleman was sitting with me. He asked her what she was reading at school. 'Oh, Sir, the whole circle of sciences!' 'Indeed,' said he, 'that must be a very large work!' 'No, Sir, it is a very small book, and I had it for half a crown.' My friend smiled, lamented that what had cost him so much time and money was of such easy attainment. I asked a little girl, a servant's child, the other day, what she was reading, and if she could say her Catechism? 'O no, Madam, I am learning *Syntax.*" What I am going to add, you will think an exaggeration, if not an invention, but it is a literal fact. A girl in the next parish being asked what she learnt, answered, I learns geography, and the harts and senses.'

"In many schools, I am assured, writing and accounts are taught on Sundays. This is a regular apprenticeship to sin. He who is taught arithmetic when a boy, will, when a man, open his shop, on a Sunday. Now, in my poor judgment, all this has a revolutionary as well as irreligious tendency; and the misfortune is, that the growing ultraism on the side of learning, falsely so called, will irritate and inflame the old bigotry which hugged absolute ignorance as hidden treasure, not to be parted with; while that sober measure of Christian instruction which lies between the two extremes, will be rejected by both parties."

Who would have expected to find *Cobbett* and *Hannah Moore* maintaining the same opinion respecting the *inexpediency* of educating the poor?

A few anecdotes shall close.

Precocious Princecraft.—"I have since dined with Bryant at Mrs. Montagu's, and we are become great friends. He 'bears his faculties so meekly,' and has such simplicity of manners, that I take to him as I did to Hermes Harris, whom every body must regret, that had the pleasure and advantage of knowing him. Only Bryant is the pleasanter man. He told me an amusing anecdote of one of the little Princes. He had been that morning to Windsor to present his book. He was met in the ante-chamber by the youngest of them, who begged to look at it. When it was put into his hands, he held it upside down, and glancing his eyes for a moment over the pages, returned it with an air of important graciousness, pronouncing it excellent!"

A singular friend for a pietist.—"Poor Ayrey dropped down dead a few days ago! he was the only Atheist I ever knew; but what I thought particularly argued a wrong judgment in him was this, that he was an honest good-natured man,—which certainly he should not have been on his principles. He was a fatalist; and if he snuffed the candle, or stirred the fire, or took snuff, he solemnly protested he was compelled to do it; and it did not depend on his own discretion whether he should buckle his shoe or tie his garter. If I had not known him well, I would not have believed there had existed such a character. He always confessed he was a coward; and had a natural fear of pain and death, though he knew he should be as if he had never been. I cannot think of him without horror and compassion.—He knows by this time whether a future state was really such a ridiculous invention of priestcraft and superstition, as he always said it was."

A Moravian Repartee.—"Miss Hamilton told us a pleasant anecdote of Hutton, the Moravian, who has the honor of being occasionally admitted to the Royal breakfast table. 'Hutton,' said the King to him one morning, 'is it true that you Moravians marry without any previous knowledge of each other?' 'Yes, may it please your Majesty, returned Hutton, 'Our marriages are *quite royal.*'"

Death-bed of an Ambassador.—"I believe I mentioned that a foreign ambassador, Count Adhe-

mar, had a stroke of apoplexy, and that he was to have had a great assembly on the night of the day on which it happened: it is shocking to relate the sequel. It was on a Sunday. The company went—some hundreds. The man lay deprived of sense and motion; his bed-chamber joins the great drawing-room, where was a faro-bank held close to his bed's-head. Somebody said they thought they made too much noise. 'Oh, no!' another answered, 'it will do him good; the worst thing he can do is to sleep.' A third said, 'I did not think Adhemar had been a fellow of such rare spirit: palsy and faro together is spirited indeed; this is keeping it up!' I was telling this to Mr. Walpole the other day, and lamenting it as a national stigma, one of the worst signs of the times I had met with. In return, he told me of a French gentleman at Paris, who being in the article of death, had just signed his will, when the lawyer who drew it up was invited by the wife to stay supper. The table was laid in the dying man's apartment; the lawyer took a glass of wine, and, addressing himself to the lady, drank *a la santé de notre aimable agonisant!*'"

The Religious Souvenir: *Philadelphia*, Key & Biddle.—The late and lamented *Dr. Bedell*, of Philadelphia, beloved as a clergyman, and respected as a scholar, was the Editor, for the three years of its existence, including the present, of this Souvenir—and though death snatched him away before this one could appear, he had selected, prepared, or approved all the materials. They are all good, though we cannot say any are marked by high excellence. As a whole, however, including the engravings, some of which are nevertheless carelessly enough executed, it is a creditable publication.

Commentary on the Book of Psalms, No. 1. By George Bush, Professor of Hebrew and Oriental Literature in the University of New York. *New York:* Leavitt, Lord & Co.—A clear and beautifully printed pamphlet—the first of a series to be published periodically, under the above title, has attracted no little attention. It is the design of the learned expositor to present with the original Hebrew text, a new literal version of the Psalms, fortifying the same by all that versions in other languages can impart of explanatory matter. The labor of such a version, when, as the author well remarks, a day may be spent upon settling the proper meaning of a single word, those only conversant with philological inquiries can appreciate.

To scholars, this commentary will be greatly attractive, while to all persons who desire to see for themselves the authority upon which this new and literal version of the Psalms is to be given, it will be not less valuable.

It is a great endeavor, and seems to be faithfully and ably made.

Three Weeks in Palestine and Lebanon.

The Fisherman's Hut, a Tale for Young Children.—These little volumes both are issued by the New-York General Protestant Episcopal Sunday School Union, and from the Protestant Episcopal Press.

The first is an adaptation, from some English travels, of facts likely to attract the attention of young readers, with notes explanatory, and some, bad enough, wood cuts.

The Fisherman's Hut is a pretty little story, intended to elucidate the moral that courage and affection, unless restrained and checked by cool forethought and prudence, may be absolutely injurious.

Usury Funds, Banks, &c. &c., repugnant to the Divine and Ecclesiastical Laws: by the Rev. Jeremiah O'Callehgan, Roman Catholic Priest, Burlington, Vermont: New-York, T. Doyle.—This is a *grave* jumble about bank usury, pew rent, grave tax, *Burking!* dissecting, &c., which fills 380 pages of an 8vo volume, and which those will read who think they need instruction whether banks, funds, and usury are contrary to the law of God.

The London Quarterly Review, No. CIII. for August. *New York:* T. Foster.—This is No. IV of the republication of the London Edinburgh Foreign and Westminster, undertaken by Mr. Foster, at the exceedingly cheap rate of $8 per annum, for the whole series. We perceive with pleasure, by a notice in this number, that the encouragement extended to the enterprize, exceeds the most sanguine hopes of the proprietor; and morever, that it may be further encouraged without any detriment to the Boston edition, by Lily, Wait & Co. of the Edinburgh and Quarterly Reviews—those gentlemen having sold to Mr. Foster the subscription list of their republication, which will now be merged in this.

The last number of the Quarterly, issued by Messrs. Lily, Wait & Co. was CII. We now have in the new form, CIII.

The American Almanac and Repository of Useful Knowledge, for 1835. *Boston:* Chas. Bowen. New York: *John Wiley.*—Assuredly the hope expressed by the publisher, founded on the favorable manner in which this work has hitherto been received, "that the public will not be disinclined to encourage its continuation," should be, as we think it will be, realized. An almanac, next to *Book of books*, is needed by every one—is in every one's hands. It has therefore been wisely deemed advisable to make an almanac really scientific, and affording at the same time useful and accurate information on many and various topics of universal interest. The idea, of English origin, has been admirably carried out by the gentlemen at Cambridge, Massachusetts, who superintended this publication, and we again take the opportunity of its annual appearance, to commend it to the attention and patronage of our readers, especially of our country readers, who will find in it, all they look for in a cheap and comparatively worthless almanac, united with much precious matter, that otherwise is not easily accessible to them.

In addition to the usual variety of miscellaneous matter, this volume devotes much space and attention to the subject of banks and the periodical press, both of great interest.

Of astronomy, as the preliminary observations inform us,

The most remarkable of the phenomena happening in 1835 and visible in the United States, is the Transit of Mercury, on Saturday the 7th of November. Although on account of the distance of this planet from the Earth, its transits are of little use, in determining the Sun's parallax and the dimensions of the solar system, they, from the very great precision with which the contacts can be observed and the slight change in the *absolute* time of beginning and end, in a large extent of country, afford the best means of ascertaining the longitude of any place on the Earth's surface. In the transit of this year, as in remarked in the 9th page, the change in the absolute time of its beginning throughout the U. States is so small, that the first contact will take place at New Orleans only 3 1.2 seconds later than in Boston.

Whether the planet can be seen during the transit without the aid of a telescope is doubtful; but viewed through that instrument it will appear as a very small, round, dark body, passing across the Sun.

In connection with this subject we cannot but give from the almanac of last year, the account of an eclipse of the sun, which occurred, unnoticed by any here, last Wednesday. Shedding "dim and disastrous twilight" as that stormy day, the third of our election, did upon the political as well as the planetary system, the darkness from on high, which fell then upon our earth, may, without any violation of truth, be said to have also fallen on the hearts and understandings of too many of the dwellers on this its western surface.

Great Eclipse of the Sun.—The most remarkable of the Phenomena that this year, (1834,) will happen, is the Eclipse of the Sun, on Wednesday, the 5th of November. This is the third of the very uncommon series of five large eclipses, visible to us, in the short term of seven years; the fourth of this series will take place 15th May, 1836, and the last, Sept. 18, 1838.

The eclipse of the present year will doubtless receive great attention throughout our country. In those places where its magnitude will not exceed 11 digits, much diminution of the light is not to be expected, even at the time of the greatest obscuration; perhaps, however, it may be sufficient to render visible the planet Venus, then above 30 deg. E. S. E. of the Sun, and much nearer the earth than usual; nor will the obscuration be very great where the eclipse is almost total; since it had been observed on former occasions, that the uneclipsed part, even when reduced to a mere point, sheds sufficient light to render small objects visible, and invisible the brightest of the stars. Indeed, on account of the refraction of the sun's rays by the atmosphere of the earth, the darkness can hardly with strictness be considered total, even when the sun is completely shut out from the sight. In the great and remarkable eclipse of of June 16th, 1806, when the sun was totally obscured at Boston for five minutes, as much light remained as is given by the moon when full, and greater darkness will not probably be experienced, in any place on the present occasion.

Throughout the United States, however, a greater depression of the thermometer, if placed in the sun, will probably be noticed; and for some minutes before and after the moment of greatest obscuration the power of a lens to produce combustion, by condensing the solar rays, will be nearly, if not entirely, destroyed. At the time of the annular eclipse of February 12th, 1831, it was observed by the editor, that the thermometer in the sun, fell from 73 to 29, and that during the continuance of the ring, no sensible effect was produced by placing its blackened bulb in the focus of a powerful burning glass.

This eclipse, as will be seen on tracing the path of the centre, will be total in a small part of the Territory of Arkansas, and of the States of Mississippi, Alabama, Georgia, and South Carolina. The principal places, in which the obscurity will probably be complete, are Charleston, Beaufort, South Carolina, Savannah, Milledgeville, Tuscaloosa, and Little Rock. The greatest duration of total darkness in any place will be at Tuscaloosa and Beaufort—these places lying very near the central path. At Charleston and Savannah, the duration will be considerably less, the former being situate about forty miles north of this path, the latter, about thirty south. The width of the line of total darkness varies in its passage across the Earth, but in the United States will be about one hundred miles. Those of the Atlantic States, who desire to behold this rare spectacle—the most magnificent and sublime of the phenomena of Nature, compared with even Niagara, sinks into mediocrity—will find Beaufort the most eligible place in which to make their observations, and they will not neglect this opportunity when they reflect that the Moon's shadow will not again, for the space of thirty-five years, pass over any part of the inhabitable portions of the United States, or until August 7th, 1860.

As, at the time of the eclipse of February, 1831, much inconvenience and even injury was sustained from want of care in looking at the Sun without any protection, for the eye, or through a glass not sufficiently colored, it may be proper to remark, that should the sky, during the continuance of the eclipse, be clear, one of the very darkest green or red glasses of a sextant, and in default of this, a piece of common window glass, free from veins and rendered quite black by the smoke of a lamp, *only* can be used with safety. If the lustre of the Sun should be diminished by intervening clouds, a lighter shade will be sufficient.

We add from an article on periodical literature, a notice of the state of the newspaper press in France, as being somewhat new to most of our readers. Since the period, however, to which this refers, 1829, great variations have taken place in the circulation of some of the papers named, particularly the *Constitutionnel*, which has been materially cut into and diminished by the *National* and the *Tribune*, both advocating more boldly than it, republican doctrines.

The *Gazette de France*, the first regular French newspaper, was established by Renaudot, in 1631, and was continued with few interruptions till 1827; when it ceased, and another paper assumed the name. Up to 1792, it forms a series of 163 volumes. Before the French Revolution of 1789, the French newspaper press was comparatively weak; and during the reign of Bonaparte, it was in a low state; yet during a great part of the last forty-five years, it has been exceedingly active and powerful; and many of the most distinguished French writers have been contributors to the the different newspapers.

The *Moniteur*, which was commenced in 1789, has, since the year 1800, been the only official jour-

nal of the government. Two of the papers that have for a considerable time been the most ably conducted and widely circulated, are the *Constitutionnel* and the *Journal des Débats*. These papers treat of a great variety of topics, embracing not only news and politics, but also the sciences, literature, and the arts. The *Constitutionnel* has for its different branches, 10 or 12 editors, and employs 8 or 10 presses day and night; and probably no other daily paper ever obtained so numerous a subscription.—The circulation of the different papers is subject to great variation. The number of subscribers of several of the papers of Paris was stated in 1829, as follows:

Le Constitutionnel - -	18,000 to 20,000
Le Journal des Débats -	13,000 to 14,000
La Gazette de France - -	7,000
La Quotidienne - - -	5,000
Le Courier Français - -	4,500
Le Journal du Commerce -	3,500
Le Moniteur - - -	2,500 to 4,000
Le Messager des Chambres -	2,000

View of the Newspapers published in France in 1832.

Daily Newspapers in Paris - - -	34
Other Journals is Paris, besides daily papers - - - - - -	136
Newspapers in France out of Paris -	173:

Of these, 30 were published once a week; 36 twice a week; 12 every other day; 1 five times a week: 9 six times a week; 10 daily; and 28 not stated how often. In France, the daily newspapers are published *every* day, *Sunday* not excepted: but in England, as in the United States, the daily papers are not published on Sundays.

HENRI QUATRE OF THE DAYS OF THE LEAGUE—2 vols.: N. Y., HARPER & BROTHERS.—A new adventurer in the field of historical romance has here presented himself, and the period chosen is one assuredly of stirring interest—just after the massacre of St. Bartholomew's, and while the *Bearnois* was yet a prisoner in the palace of the Louvre. For fidelity of *costume* and incident we do not doubt that this romance may compare advantageously with any in its line; but there is wanting the life, the reality, which give to the similar works of *Scott*—and we may say, with truth, *James* too—an actual and present existence, so that the whole scene seems to pass before our eyes. Their stories tell themselves—here the story is told—the style, moreover, is constrained; and the dialogue, when it occurs, elaborate and unnatural. Notwithstanding these objections, there is much vigor in the delineation of character; particularly in that of *Catherine of Medicis*, and both originality and vigor in that of *Villa-franca*.

FOREIGN INTELLIGENCE.

BY THE NORTH AMERICA from Liverpool, and the PHILADELPHIA from London, papers to the 5th ult. from the latter place are received.

The death of Don Pedro and the affairs of Spain, occupy chiefly their columns.

A few extracts are annexed.

The revolt of the relatives of Colocotroni and Coliopulo had been suppressed, and the leaders, after a sanguinary conflict, conveyed in chains to Nauplia.

Another insurrection has broken out in Maine and the Morea among the partisans of Colocotroni. They demand the dismissal of all the foreign functionaries employed by King Otho, and a redressal of other grievances arising from the Bavarian measures of the Regency. The government has under its orders 7000 men, of whom 4000 are German volunteers.—The English had despatched some ships from Malta to the coast.

Namick Pacha, the Turkish Ambassador at the Court of Great Britain, left Paris on Thursday for London.

The *Constitutionel* has the following:—"The veil which has hitherto covered the object of the mission of Mustapha Reschid Bey Effendi begins to be drawn aside. Turkey finds herself in a difficult position. If she were openly to solicit the support of France and England against the Emperor Nicholas, she would immediately excite him to hostilities without being able to rely upon the immediate and effective aid of the other two powers. For though the Russian fleet might be destroyed by that of England, the Russian army might in the mean time cross the Balkan before the troops of France or England could be brought to oppose it, or unless Austra might be disposed to avert the storm, as she could do if she were willing. Guided by these considerations, the Divan, it is confidentially stated, has instructed the Effendi to require from the Cabinets of the Tuileries and St. James's that they would endeaver to avoid entering into a war on account of the complicated state of the East, since the Ottoman Empire would become the theatre of such a war, and thereby have its prosperity destroyed.—Such at least is asserted to be the ostensible object of the visit of Mustapha Reschid, but it appears to be unquestionable that beyond this request, dictated by prudence, Turkey, in order to promote her future interest, is seeking a protection against invasions from the North It was at first believed that the stay of the Turkish Envoy at Paris would not exceed three months, but it is now certain that it will be much longer. Russia, however, does not seem to be yet prepared to carry into execution the designs formed by the Empress Catharine against Turkey. The Emperor is making a display of his military forces at St. Petersburgh, and he is also concentrating bodies of troops in the south, but the sinews of war, and money, are wanting to him.—Russia has lately made an attempt to raise a new loan, but she has failed. The details of this negotiation will ere long be made public. Russia therefore must take time, and this explains her affability towards France, and the presence of Count Pozzo di Borgo at Fontainbleau."

By the last census it appears that there 785,000 inhabitants in Paris, who occupy 29,000 houses.

Seventy-three periodical journals, in twelve languages, are issued from the press in Russia. There are 1,411 elementary schools, with 70,000 pupils At the universities, 3,100 students are educated; and the ecclesiastical institutions prear 3,600 theologians for the service of the Greek church. In the former there are 300; in the latter 427 professors.

Mr. Gibbons Merle.—The English newspapers mention the death of this laborious *littérateur*, of cholera, at Boulogne. He was long engaged in the periodical press of London, and by turns contributor to and editor of several popular journals.—We do not know that he produced any original work.

M. Arnault.—The *perpetual* Secretary of the Académie Francais (so far as aught human can be perpetual in this world) died recently in the 68th year of his age. He was the author of the celebrated tragedies of *Marius* and *Germanicus*: and also of some excellent and instructive fables.

An old Sailor.—Gallignani's Messenger mentions the existence of a Sailor, named Conrad Vancouver, who had attained the age of one hundred and thirty five years. He resides at Dordrecht, in Holland, and is supposed to be the oldest man now living in Europe.

SUMMARY.

Dividend.—The Atlantic Insurance Company have declared a dividend of *four* per cent. for the last six months, payable on the 15th inst.

The Springfied, Illinois Journal, says, "Emigrants are flocking into our State, caravans from Kentucky, Ohio, and Virginia, are constantly passing through this town, on their way to the rich country north west of us. Sangamo is also rapidly increasing her population. The emigrants appear to be of the best description—possessed of substance, intelligence, and enterprize. They are welcome to the advantage which our state offers them—and thousands of others would be welcome. Illinois will sustain a population of several millions. Its inhabitants now number, probably, 230,000.

[*From the National Gazette.*]

Died, at New Harmony, State of Indiana, on the 10th ultime, THOMAS SAY, the distinguished Naturalist, in the 47th year of his age.

To a mind fully impressed with the glories of nature, to an ardent votary in the temple of fame, the allurements of pleasure and the desire of wealth are equally indifferent; his studious habits unfitted Mr. Say for mercantile pursuits, and he consequently failed in an occupation in which he eagerly engaged, at the solicitation of a kind parent, the late highly respected Dr. Say. The Moloch of riches was sacrificed at the shrine of science. He subsequently devoted himself with an enthusiasm which can never be too much admired, and a resolution which no reverse of fortune could shake, to the study of his favorite sciences: with what success the republic of letters can testify—ask the Savans of Germany, of France, and of England, and they will with one accord thankfully acknowledge the discoveries due to his labors. It may indeed be fearlessly asserted that few individuals, certainly none in this country, have so extensively contributed to enlarge the boundaries of natural knowledge. To *his* native genius, supported by untiring zeal and indefatigable research, the Academy of Natural Sciences of Philadelphia is indebted for its opening reputation. Mr. S. was among the earliest members, if not one of the founders of the institution.

His original communications to the Society alone, in the most abstruse and laborious departments of Zoology, Crustacea, Testacea, Insecta, &c., of the United States, occupy more than 800 printed pages of their journal. His essays published in the transactions of the American Philosophical Society, the Annals of the Lyceum of Natural History of New York, in Silliman's Journal, &c., are equally respectable, perhaps equally numerous. His contributions to the American Encyclopedia, though highly valuable, are not so generally known. His separate work on American Entomology and another on Conchology, have met with the approbation of the learned. With the brilliant results of his laborious exertions as Naturalist to the two celebrated expeditions by the authority of the United States Government, under command of Major, now Lieut. Col. S. H. Long, the reading public is already familiar. Some years previously he accompanied Mr. McClure, and other kindred spirits, on a scientific excursion to the Floridas. The pages of the Academy's Journal were subsequently enriched by the fruits of this undertaking. These expeditions, with occasional excursions, made with similar views, in the vicinity of Philadelphia, constitute the only interruption to a laborious course of studies, steadily and unostentatiously pursued, in his native city, in which many departments of natural science were successfully cultivated and extensively enriched by his observations and discoveries.

In the year 1825 our devoted student consented, in an evil hour, to forego the society of his early friends, the companions of his labors, and all the advantages of a large and populous city, and at the earnest instigation of his friend, Mr. McClure, President of the Academy of Natural Sciences, he abandoned forever his native home. New Harmony, on the Wabash, State of Indiana, had now become the Land of Promise, where new views of the social compact, and new institutions, literary and philosophical, were to be promulgated and tested. How soon these Eutopian visions vanished in airy nothings the public is well informed. The principal agents in this Agrarian establishment are scattered to the four corners of the earth, whilst man, as usual, is hurried along to the consummation of his destiny. Considerable sums had been expended in landed property; this required the presence of a few confidential agents to protect it; in this capacity Mr. Say consented to fix his permanent residence at New Harmony, at the request of Mr. Wm. M'Clure, whose infirm state of health obliged him to seek a more genial clime. Mr. S. soon after his arrival in New Harmony, wedded a lady of congenial habits, and appears to have become reconciled to his new domicile: mere locality was to a considerable degree matter of indifference to a naturalist, so long as he found himself surrounded in rich profusion with the objects of his research, supplied as he was, by the liberality of his patron, with a valuable library.

Our much lamented friend had recently devoted much of his time to the publication of his work on American Conchology, elucidated by expensive plates. He might have continued thus usefully employed for many years, had not the climate on the Wabash proved injurious to his health; he repeatedly suffered from attacks of fever and dysenteric affections, by which a constitution originally robust and inured to hardships materially suffered. A letter announcing the sad catastrophe which deprived society of one of its worthiest members and science one of its brightest ornaments, informs us that Mr. S. suffered another attack of a disorder similar to that by which his constitution had already been shattered, about the first of October: on the 8th the hopes of his friends were flattered by a deceitful calm; on the day following, these hopes were chilled; he appeared sinking under debility, when on the 10th death came over him like a summer cloud. He died intestate and without issue, but left with his wife verbal directions relative to the final dispositions of his library and Cabinet of Natural History. H.

Large Dividend.—The American Insurance Company have this day declared a dividend of 8 per cent., for the last six months, payable on the first day of December.

The Rev. Mr. Coit, of the Episcopal Church in Cambridge, Mass. has been elected President of Transylvania University.

St. Augustine.—Many of our citizens annually resort to this ancient southern town in quest of health. A third of all the visiters there last winter, were from this state. Several of them went too late. In their last sickness, as the survivors testify, they were most kindly treated by the residents of the place. By the minister and members of the episcopal church, it is said, the most liberal and persevering kindness was exerted towards all who needed. That church is now soliciting aid to discharge a pressing debt necessarily contracted. By the death of the late indulgent creditor, the pressure has fallen unexpectedly—and *ruinously* too, if relief be not obtained. We hope and trust it will be. For we have learned with pleasure, that Mr. Isaac C. Kendall, to whom all the facts of the case are personally known, and who, therefore, takes a deep interest in the subject, has obtained two subscriptions of fifty dollars each, with several of smaller sums. Let every one applied to give *something*, and their minister may soon return to his people and make their hearts glad with the means of relief. And then will they resume their annual labors of love to the sick strangers among them with renewed energies and thankful hearts.—[Com. Adv.]

A Boston paper says that a translation of 'I Promessi Sposi'—the celebrated Italian novel of Masoni—is about appearing under the title of 'The Betrothed.'

The work in question has been for sale in this city for the last six months.

A gentleman of Darien, (Geo.) proposes in the *Telegraph* of that place, to furnish a pedestrian to take up the offer of Mr. J. C. Stevens, of New York, to give a considerable sum of money to any one "white, red, or black or of any intermediate color," who will accomplish ten miles in the hour, provided Mr. S. will consent that the trial be made on the race course near Savannah. "The person selected," says the Telegraph, "is a black man, and though his speed has never been tested to the extent required by Mr. S., the gentleman has little doubt he will be able to accomplish the task imposed on him."

The State of Georgia has purchased of his owner, at the enormous price of $1800, a negro man named *Sam*, with a view to his emancipation, for his services in extinguishing the fire on the State House, which occurred upwards of a year ago.

Dreadful Accident.—A letter from Missouri to a gentleman in Baltimore, dated October 25, states that the steamboat Boonslick, in descending the river, on the previous night, came in contact with the steamboat Missouri Belle, bound to St. Louis, when about fifteen miles above that city, and that such were the force and effects of the concussion, that the Missouri Belle sunk in less than two minues, in about one hundred feet water. It is added that, at the time of writing the letter fifteen or twenty persons were missing—supposed to have been lost with the boat!—[Com. Adv.]

A Yankee Editor's Excuse for lack of Editorial.—If we had a subscriber on our list that we thought would not take the following as a sufficient excuse, for the want of *a single line*, we would erase his name from our list:—

"The business of the editor has been too multifarious this week to admit his paying much attention to the *editorial department* of his paper. Our printer and devil have both been drunk, and we (that is ourself) have been compelled to set most of the types and do the press work for the paper. It is known that "we" are a practising physician, and that our calls have been unusually prolific this week. Our sister's nurse has been sick, and we have been compelled to spend a considerable portion of our time in rocking the cradle. This would appear a sufficient excuse for any reasonable man, but it is not all. A beautiful black eyed girl came to town last Saturday, and we had no sooner seen her than we were half dead in love; we have, during the week, wooed and won the dame, and shall (if no lawful objection be made) be married at the Methodist church to-morrow. Are our patrons satisfied? If not, we hope they may be doomed to a life of celibacy!! Or if married, doomed to all the horrors of the henpecked husband!!"

The Baltimore American of yesterday states, that "His B. M. ship Arachne, Capt. *Burney*, mounting sixteen guns, arrived at this port yesterday from Jamaica. On coming to anchor, salutes were interchanged with Fort M'Henry. We understand she brings passenger Captain Kitson, of the Royal Engineers, who is charged with the duty of erecting Light-houses on the Coast of Florida and the Bahama Islands, in conformity with an arrangement entered into some time ago, between the Governments of Great Britain and the United States. It is believed this is the first armed vessel which has entered this harbor since the late war."

[*From the North Alabamian.*]

Tuscumbia, Oct. 25.—*A tough one.*—The Florence Gazette states that on Sunday night last, there was a hard frost, and ice *three inches thick*. We commiserate the condition of our northern neighbors.

Southern Frost.—The Alabama Flag of the Union, of Oct. 23, says—There was a severe and killing frost at this place on Monday last. Vegetation is effectually nipped. The cotton crop had so far ripened, that no injury will have been sustained by the planters. At Edisto, N. C., on the 21st, there was a killing frost, which has curtalied a crop previously short. A letter from that place says—"You may, with the most perfect certainty, rely upon the fact of there being not more than the half of a Sea Island crop sent to market this season from Edisto. Of the neighboring Islands, all the information we have been able to gather, state the Crops as inferior, much worse than with us."

Cumberland, Md., Nov. 4.—*Bears—Child Destroyed.*—During the present season, bears have been very frequently seen westward of this place, most generally in or near corn fields. A letter from Petersburg, Pa., published in the Advocate, states that they are often seen crossing the turnpike near that town; and that a small boy, who had been sent in search of the cows, had recently been devoured by bears in that vicinity. The legs and feet of the little sufferer were found, which revealed to his agonized parents the fate of their child.—[Civilian.]

A similar melancholy event is mentioned in the Bradford, Pa., Settler of the 1st inst., from which we learn that a small child in Tioga county was lately seized by a bear, whilst in a field with some cows, not far from the dwelling, but before assistance could be rendered by some men who were in sight, was deprived of life, and partly devoured.

The same paper states, that an acquaintance in Smithfield had been recently seized, and considerably mangled, by a wounded bear, of which he and others had been in pursuit. He was saved from death by the timely interference of his comrades.—[Baltimore Patriot.]

On the Twenty-third Sunday after Trinity November 2d, the Bishop of this Diocese instituted the Rev. Thomas Pyne, A. M., late Rector of St. Paul's Church, Brooklyn, into the Rectorship of St. Peter's Church, in this city. The Morning Prayer was read by the Rev. Samuel H. Turner, D. D., of the General Theological Seminary, assisted by the Rev. Charles Luck, of the Church of England, and the sermon, being the annual matriculation sermon of the General Thological Seminary, preached by the Rev. Bird Wilson, D. D., of that Institution.—[Churchman.]

The Newark Daily Advertiser of yesterday relates the following

Tale of Marvel.—Rumor with one of her ten thousand tongues, brought us a mysterious story yesterday of a "mysterious lady," which so far challenged credit that we were induced to send a competent witness in the afternoon to procure more particular information. Our agent, after the fullest opportunity of observation, has returned this morning, and communicates the following facts which we give without embellishment, as he relates them.

On Monday night of last week the family of Mr. Joseph Barron, living in the township of Woodbridge, about three mile from Rahway in this county, were alarmed after they had retired, by a loud thumping against the house. Mr. B's first impression was that some person was attempting to break in, but further observation soon undeceived him. The thumping, however, continued at short intervals, until the family became so alarmed, that Mr. B. called in some of his neighbors, who remained up with the family until day light, when the thumping ceased.

The next evening, after night fall, the noise recommenced, when it was ascertained to be mysteriously connected with the movements of a servant girl in the family,—a white girl about 14 years of age. While passing a window on the stairs, for example, a sudden jar accompanied with an explosive sound broke a pain of glass: the girl at the same moment being seized with a violent spasm. This of course very much alarmed her; and the physician (Dr. Drake) was sent for, came, and bled her. The bleeding, however, produced no apparent effect: the noise still continued as before, at intervals, wherever the girl went, each sound producing more or less of a spasm, and the physician with the family remained up during the night. At day light the thumping ceased again. On the third evening the same thing was repeated, commencing a little earlier than before, and so every evening since, continuing each night until morning, and commencing every evening a little earlier than before, until yesterday, when the thumping began about 12 o'clock at noon.

The circumstances were soon generally spread through the neigborhood, and have produced so much excitement that the house has been filled and surrounded from sun-rise to sun-set every night for nearly a week. Every imaginable means have been resorted to in order to unravel the phenomenon. At one time the girl would be removed from one apartment to another, but without effect. Wherever she was placed, at uncertain intervals the sudden thumping noise would be heard in the room. She was taken to a neighbor s house; the same result followed. When carried out of doors, however, no noise is heard. Dr. Drake who has been constant in his attentions during the whole period, occasionally aided by other scientific observers, was with us last evening for two hours, when we were politely allowed to make a variety of experiments with the girl in addition to those heretofore tried, to satisfy ourselves that there is no imposition in the case, and if possible to discover the secret agent of the mystery.

The girl was in an upper room with a part of the family when we reached the house. The noise then resembled that which would be produced by a person violently thumping the upper floor with the head of an axe, five or six times in quick succession, jarring the house, ceasing a few minutes, and then resuming as before. We were soon introduced into the apartment, and permitted to observe for ourselves. The girl appeared to be in perfect health, cheerful, and free from the spasms felt at first, and entirely relieved from every thing like the fear or apprehension which she manifested for some days. The invisible noise, however, continued to occur as before, though somewhat diminished in frequency and sound while we were in the room. In order to ascertain more satisfactorily that she did not produce it voluntarily, among other experiments we placed her on a chair on a blanket in the centre of the room: bandaged the chair with cloth, fastening her feet on the front round, and confining her hands together on her lap. No change however, was produced: the thumping continued as before, except that it was not quite so loud: the noise resembling that which would be produced by stamping on the floor with a heavy heel. Yet she did not move a limb nor a muscle that we could discover. She remained in this position long enough to satisfy all in the room that the girl exercised voluntarily no sort of agency in producing the noise. It was observed that the noise became greater the farther she was removed from any other person. We placed her in the door-way of a closet in the room, the door being ajar to allow her to stand in the passage. In less than a minute the door flew open, as if violently struck with a mallet, accompanied with precisely such a noise as such a thump would produce. This was repeated several times with the same effect. In short, in whatever position she was placed, whether in or out of the room, similar results, varied a little, perhaps, by circumstances, were produced. There is certainly no deception in the case. And now for conjecture. For ourselves we offer none, but among other conjectures which have been suggested by Dr. D. and others is that the phenomenon is electrical.

This conjecture is supposed to be supported by the fact that the noise is prevented by the intervention of substances that are non-conductors; as for instance, when a pillow was placed between her person and the door in which she stood, no noise or effect whatever was discoverable. So when she gets upon a feather bed: and again if she lays at length on the floor, the thumping appears to be near her head, which is very much affected at the moment of the report, so much so that she screams; on one such occasion she said it appeared as if some one was "knocking her brains out."

The noise of the reports may be heard at least 100 yards from the house.

EXCERPTS.

[*From the New British Novel called "Dacre."*]

It certainly is a most fortunate circumstance that watches and cloaks are never in love, for without their interference poor time would, indeed, be most sadly belied. Every one takes his own fanciful view of the rate that he flies. Suspense makes a moment an age, and joy turns a day to an hour. Ennui lives a life in every week: and whilst idleness chides the slow flight of his foe, industry murmurs that he escapes her so swiftly. Still old time goes on his own unwearied and unvaried pace, and various are the contrivances which, like faithful emissaries, mark that he does so, and love—even love—must submit to the cold decision of a well regulated clock. Lovers may storm at delays that barely exist, and protest that hours gone by are yet to come; but, the dull, insensible minister of time looks on unmoved by his passion, he strikes with stern justice—points at truth with his hand, and man must bow to the power of calculation he has lost."

"How often is the happiness of married life destroyed by the weak indulgence of a captious temper. How often may the confidence of those who have no thoughts but for each other be shaken, by this uncertainty in the effect produced by their communications. How completely is the mutual ease, the unrestrained openness, happy feeling of equality destroyed, when the curl on the lip and the frown on the brow must be watched, and the tone of the voice must be listened to, ere the subject in question can with safety be broached. When once the thought that *now* was the fitting opportunity has crossed the mind of either party, and when the delay is felt more as a reprieve than a privation, then may both be sure that for the questionable pleasure of indulged irritability, one of the blessings of matrimony has been forfeited. They are at once deprived of the comfort of that quick and open interchange of thought and feeling which should exist in wedded life."

"Marriage is to a woman at once the happiest and the saddest event of her life; it is the promise of future bliss, raised on the death of all present enjoyment. She quits her home, her parents, her occupations, her amusements, every thing on which she has hitherto depended for comfort, for affection, for kindness, for pleasure. The parents by whose advice she has been guided—the sister to whom she has dared to impart the every embryo thought and feeling—the brother who has played with her, by turns the counsellor and counselled—and the younger children, to whom she has hitherto been the mother and the playmate—all are to be forsaken at one fell stroke; every former tie is loosened, the spring of every hope and action is to be changed; and yet she flies with joy into the untrodden path before her. Buoyed up by the confidence of requited love, she bids a fond and grateful adieu to the life that is past, and turns with excited hopes and joyous anticipation to the happiness to come. Then wo to the man who can blight such fair hopes—who can treacherously lure such a heart from its peaceful enjoyment, and the watchful protection of home—who can, coward-like, break the illusions that have won her, and destroy the confidence which love had inspired. Wo to him who has too early withdrawn the tender plant from the props and stays of moral discipline in which she has been nurtured, and yet make no effort to supply their place; for on him be the responsibility of her errors—on him who has first taught her, by his example, to grow carless of her duty, and then exposed her with a weakened spirit and unsatisfied heart to the wide storms and the wily temptations of a sinful world."

"There is something in the wildness and sublimity of mountain scenery, that tends to remind us rather of eternity than decay. The perishable works of man are no where to be seen. No city lies in gloomy ruins, to show the outlines of its faded greatness—no remnant of a sanctuary here stands to show the worship that has passed away. We see no falling records of the glorious deeds of those whose names are learnt in history's page. We stand upon the mountain, and we scarcely know that man exists upon the earth. This is not the land where arts have died, or science been forgot—these rocks never echoed the eloquence of orators, or the song of the poet—these waters never bore the proud ships of the merchant—this soil never yielded to man the fruits of his industry. It is not here that the finger of time can be recognized. In vain would he set his mark on snows that never melt, or disturb the fast-bound form of adamantine ice. In vain he stretches out his hand where the rushing torrent, and the waving waterfall[illegible] with an eternity of youth, dash on their [illegible], regardless of the blighting power that withers strength, or lulls to rest the creations and the creatures of mortality.

"Here may we pause, and say that Time has lost his power. Here may we view the faint efforts of Time overthrown in an instant. Changes there are; but the work of an hour has defeated the slow progress of decay. The lightning of the thunder-storm—the blowing tempest—the engulphing flood—the overspreading avalanche—have effaced from the surface of nature the impress of Time, and left nought in the change to remind us of age. Surely there are scenes in life which seem created to awaken in mankind the recollection,—that even Time can lose its power. Who will not feel the nothingness of the pleasures—the cares—nay, even the sorrows of our petty span, when, for a moment, he dwells with his heart and soul upon the thoughts of an eternity!—Yes, it will sober the gay—it will comfort the grieved."

"Nothing adds more to the consciousness of wo than being surrounded, in vain, by all that wealth can purchase or luxury invent. When the heart sickens at the sight of objects that in happier times gave pleasure, how painfully is the conviction pressed upon the mind, that it was to the lost happiness within, they must have owed their power to please? When the dull cold eye gazes with indifference on the unaltered baubles that have amazed, and the employments that have occupied, who is not the more forcibly reminded of the change that has been wrought in themselves? and whilst memory quickly summons the sad contrast before us, the bitter certainty becomes more fixed in our hearts, that the train of joyous thoughts they once could give has vanished from our minds."

"There are events in life that seem too great, too sudden, too overwhelming, to be true. We cannot believe that the hopes, the joys, and the sorrows of life, can depend on the work of a minute. We measure by the hours, the days, and the years, that have been spent in their anticipation, enjoyment, or endurance. We look to the gradual realization of our hopes and wishes; we think our joys will be weakened by decay, ere they depart. We trust that time will wear away, with its slow workings, the keenness of sorrow: but on these sudden revulsions of fate we are too much startled to believe them possible, and the first impression is to doubt the reality of the change that has been wrought."

"The arrival of letters from home is always a moment of excitement to those who are travelling abroad. It recals us at once to all we have left—to the cares we would forget, the sorrows we would efface, the joys that are passed. The messenger is expected with feverish impatience, and yet we tremble to read the tidings he brings. The letters are placed in our hands, and quicker than thought the directions are looked at, the hand-writings are recognized, and we glance at the seals to descry if any have come on a message of death.

"Some are sure to tell of change; and the change will startle, when its pregress is unseen. Perhaps we read that friends will join us in our pilgrimage abroad, their fortunes broken, or their health impaired. We hear the men we left in power have ceased to rule. The splendid mansion where we danced and feasted is now the prey of creditors, who once decked it so richly for pleasure. The house that wept a father's death, now lights its halls in honor of its heir. The giddy girl has pledged her troth—the reckless youth has learnt a husband's fondness, and a father's care—the widow wears again the bridal robe—the laughing girl we saw so full of life, now droops beneath the blight of pale consumption—the child who frolicked at our parting, is cold and stiff within its early grave.

"The afflictions we grieved for, have ceased to afflict, and the joy we rejoiced at, is turned into sorrow. Yes! we read of such changes in those with whose image we have long been familiar: we marked them not when we were near, but, when removed to a distance, they show us the progress of life.

"How sadly this progress is watched by the mind which is dead to all changes, and stands still in its grief! How dispiriting to see the healing powers of time in others close the wounds of sharp affliction, and yet to feel it has not plucked from our hearts the deep canker of disappointment!"

"Lady Emily Somers had certainly been one of those whom education and habit had alike combined to cherish every feeling which nature had implanted. Her nature was to love and to be loved, and she had been nurtured and brought up in the atmosphere of affection. Her sensibility had not been deadened by the voice of unkindness. She had known no vicissitudes of fortune—she had borne no affliction—she had suffered no illness. The occasional irritability of her father's temper had sometimes cost her a pang, but then it was her pleasing task to dispel the frown that was gathered on his brow: and though she had watched with anxious care the bed of sickness, she never yet had failed to impart to the sufferer the cheering influence of her own sanguine disposition. She had met with all the admiration from the world which her beauty and her charms deserved, and yet she was unconscious of distinction. She had always been lovely—she had always been engaging, and she had been admired and loved from her infancy. Admiration came not to her as the welcome tribute to an ambitious vanity, but as that to which she had been so accustomed, that it seemed a part of life itself; she thought the better of human nature for the kindness she experienced, but knew not that she created the feelings she approved. Her life had been but one bright chain of smiles, and joy, and hope—her first and only sorrow had been the fear of Dacres' inconstancy, and the having unconsciously misled her mother, respecting her feelings towards him. But now she had met him at Denham, her confidence in his love was reassured. She had since confided all to her mother, and she had been folded to that mother's heart, and thanked for the motives that had restrained her confidence, at a time when she needed and desired the comfort of a parent's support."

"There have been some who think that love is a native of the rocks; but its birth place matters little, when once it is called into being, for it can thrive alike wherever it is transplanted. It shrouds itself in an atmosphere of its own creation, and sees the surrounding objects through the medium of its own fanciful halo. The existence of colors depends not more on the rays of the sun, than depends the hue which is lent to all that is external, upon the internal feelings of the mind. The bustling scenes of gayety may appear ill suited to the indulgence of deep feeling, yet the mind which is preoccupied by some absorbing thought, has not only an inward attraction that bids *defiance* to the intrusion of others, but has even the power of converting into aliment all that should tend to destroy its force. The crowds that pass before the eyes of a lover, seem but as a procession of which his mistress is the queen. If he talks to another, it is to listen to the welcome theme of her praise from the voice of partial friendship; and if the actions of others ever attract his attention, it is to observe with the general watchfulness of a lover, the manner and reception of those whom he regards as rivals."

"It is seldom, indeed, that friendship, pure friendship—exists, where love dares creep in. From the ties of kindred and of gratitude may spring affection in its purest form—regard, respect; but the friendship that arises from the conscious preference to each other's society—the friendship that induces the opening of the heart, the almost unrestrained confidence of feelings, thoughts, opinion—the friendships that lets the stranger know the secrets of our home, and yields to intimacy the claims which kindred only should assert—treads a dangerous path. The happiness of one, if not both, is too often sacrificed in the vain endeavor to check the growth of feelings that are nourished with fresh food. In single life, the wish for dearer ties will soon arise; and often, too often, in married life, has the friendship, begun in innocence and honor, displaced the joy and peace it never can restore.

There are few whose vanity will not rejoice at the flattering distinction of being chosen confidant—few whose hearts can withstand the interest created by this dependence on the counsel, the confidence, or the sympathy of themselves: and friendship, fairest, gentlest child of love, is soon exchanged for passion fierce and strong. Young hearts should beware how they tread in this path of delusion. The friend of the family may prove an admirer, he may win affections that de did not seek—may give his love to one who neither knows nor heeds its possession—he will see the cloud that is gathered on the husband's brow—he may hear the hasty word, the harsh rebuke—then watch the tear that is shed by the wife from coldness or neglect; and from pity for the woman's sorrows springs the love that cannot, or that should not, be requited.

FOREIGN MISCELLANY.

The Late Mr. Canning.—Through the whole of the Napoleonic wars this man was the evil genius of the Peninsula; for, passing over the misplaced military powers which he gave to Mr. Villiers' legation in Portugal, while he neglected the political affairs in that country, it was he who sent Lord Strangford to Rio Janeiro whence all manner of mischief flowed. And

when Mr. Stuart succeeded Mr. Villiers at Lisbon, Mr. Canning insisted upon having the enormous mass of intelligence, received from different parts of the Peninsula, translated before it was sent home; an act of undisguised indolence, which retarded the real business of the embassy, prevented important information from being transmitted rapidly, and exposed the secrets of the hour to the activity of the enemy's emissaries at Lisbon. In after times when by a notorious abuse of government he was himself sent ambassador to Lisbon, he complained that there were no archives of the former embassies, and he obliged Mr. Stuart, then minister at the Hague, to employ several hundred soldiers, as clerks, to copy all his papers relating to the previous war; these, at a great public expense, were sent to Lisbon; and there they were to be seen unexamined and unpacked in the year 1826! And while this folly was passing, the interests of Europe in general were neglected, and the particular welfare of Portugal seriously injured by another display of official importance still more culpable. It had been arranged that a Portuguese auxiliary force was to have joined the Duke of Wellington's army, previous to the battle of Waterloo; and to have this agreement executed, was the only business of real importance which Mr. Canning had to transact during his embassy. Marshal Beresford, well acquainted with the characters of the members of the Portuguese regency, had assembled fifteen thousand men, the flower of the old troops, perfectly equipped with artillery, baggage and all things needful to take the field: the ships were ready, the men willing to embark, and the marshal informed the English ambassador, that he had only to give the order, and in a few hours the whole would be on board, warning him at the same time, that in no other way could the thing be effected. But as this summary proceeding did not give Mr. Canning an opportunity to record his own talents for negociation, he replied that it must be done by diplomacy; the Souza faction eagerly seized the opportunity of displaying their talents in the same line, and being more expert, beat Mr. Canning at his own weapons, and as Beresford had foreseen no troops were embarked at all. Lord Wellington was thus deprived of important reinforcements; the Portuguese were deprived of the advantage of supporting their army, for several years, on the resources of France, and of their share of the contributions from that country; last and worst, those veterans of the Peninsular war, the strength of the country, were sent to Brazils, where they all perished by disease or by the sword in the obscure wars of Don Pedro! If such errors may be redeemed by an eloquence, always used in defence of public corruption, and a wit that made human sufferings its sport, Mr. Canning was an English statesman, and wisdom has little to do with the affairs of nations.—[Colonel Napier's History of Peninsular War.]

Expedition to Central Africa.—On Thursday morning the expedition for exploring Central Africa, under the command of Dr. Smith, proceeded on its perilous undertaking. The party consists of Dr. Smith, Captain Edye, of the 98th Regiment, Mr. Charles Bell, Mr. Burrow, besides two gentlemen from India, who will accompany them as far as Lattakoo. They were escorted in the morning to a considerable distance on their journey by Sir John Herschell, Mr. M'Clear, the Astronomer Royal, Mr. Meadows, and Baron Van Ludwige, gentlemen attached to them by friendship and a common zeal for discovery. They started in excellent spirits, making allowance for those feelings the occasion excited, when solicitude for the safe return of these enterprising men was mixed up with sincere friendship and esteem. Indeed the history of all former expeditions to the interior of Africa proves how much hazard must be incurred, even when the greatest prudence and address are exercised. The present has been planned with much care, and, considering the talents of those engaged, the best results may be anticipated. The whole expedition will assemble at Graaff Reinet, which will be the point of departure on their bold enterprise. When Captain Edye was leaving the barracks in the morning, the 98th Regiment, with the band, turned out, a gratifying token of the respect and esteem felt for him by his brother officers and men.—[South African Advertiser, July 11, Cape of Good Hope.]

Post diem Surgery.—In June, 1833, a miller received a sabre cut at a public house, which completely amputated his right ear. Before he left the house he picked up the ear from the ground, and put it in his pocket. This was in the evening.—Early in the following morning he went to a surgeon and showed him the ear, now cold, and somewhat crushed. The surgeon washed the ear in spirits and water, and made a new edge to the part of the wound which the man still possessed, and to that of the ear which he had lost. After accurately fitting the parts, he kept them together by four stiches, and dressed them with adhesive plasters, compresses, and an appropriate bandage. The day after some of the dressings were removed, in order to make sure that the parts were in contact; the point of union was then observed to be red, the patient was feverish, and had thirst and headach. In eight days these symptoms disappeared, and the helix began to assume its vital warmth; the lober extremity united the first; the other parts suppurated, and granulations appeared on the cartilages. In a little more than a month the cure was complete; the patient's right ear was almost in the same condition as the left, and all that was remarked was an eliptic linear cicutrix at the point of union.—[Medical and Surgical Journal.]

Fertility of Belgium.—The glorious fertility of the agricultural districts well deserves to be mentioned. Were there nothing else to reward a traveller for going thither, I think the sight of the rich fields of Flanders would be enough to do it. * * * England has noble fields of grain, and her herbage is rich and abundant; but in Flanders the soil is crammed with produce, and the corn stands on the ground like a solid mass. In short, Belgium is a beautiful little kingdom, and, notwithstanding the extent of territory be small, it has sufficient within its circuit to give its name a higher rank among the nations of the continent than its extent of domain alone could justify.—[Mrs. Trollope's German Tour.]

Namik Pasha.—The following notice of Namik Pasha, the Turkish ambassador who has just arrived in this country, is given by the correspondent of the *Morning Herald* at Constantinople:—"The presence of Namik Pasha in England, at this moment, must be hailed as an event pregnant with great results. No man knows better what may be made of Turkey—no man knows better that the weakness so often complained of is in her government, not in her people.—If so inclined, he can enlighten the British Cabinet on the identity of our interests with those of his country. Namik Pasha is a superior man, and to him Turkey owes many of her internal improvements; his brigade has always been an example of order and industry; he caused all his men to be instructed in some mechanical art, so that the many leisure hours of a military life have not been hours of idleness. The army is indebted to him for the translations of several useful works on tactics; he has been a warm advocate of education, and was the main instrument of establishing it on the Lancasterian system, which under his fostering care, has already been spread far and wide, notwithstanding a thousand vexatious difficulties ever thrown in his way by the narrow-minded. In a word, Namik Pasha has already rendered important service to his country, and I sincerely hope his efforts to save it from the impending danger may be crowned with success, which depends upon England alone.

Influence of the Stomach.—The emotions of the mind have a powerful influence upon the stomach.—Let a man who is going to sit down to dinner with a good appetite, receive a piece of news, either exceedingly joyful or exceedingly distressing, his appetite goes in a moment. Children who are about to set out on a pleasant journey, it is well known, cannot eat. This, when I was a child, used to be called being "journey-proud." On the other hand, a blow upon the stomach will sometimes take away life instantly; a drink of cold water, when the body has been very hot, has often had the same effect. Attend to your companions when on a journey a-foot; as their stomachs grow empty, how sullen and silent the whole party becomes! let a crust of bread a little cheese, a glass of ale or wine be taken, and cheerfulness immediately reigns, even long before any nutriment has had time to reach the general circulative system. These things all show the general sympathy between the stomach and every other part of the body.—[Carbutt's Clinical Lectures.]

Zincography.—It was but a few years past that we had to record an advance in the fine arts, in the invention of lithography, which afforded increased facilities in the art of engraving. Lithography is now, however, likely to be displaced, at any rate to a great degree, by the invention of an ingenious Frenchman, M. Breugnot, who has succeeded in preparing a composition of metal, the basis of which is zinc, upon which drawing and writing can be effected with equal, if not with greater facility than upon stone, and as easily applied to paper with the same machinery. The art of zincography has several advantages over that of lithography, amongst others, in the portability and comparative cheapness of the plates, over the necessary bulkiness and cost of stone. These plates can even be adapted to a lady's portfolio, to any thickness, and to any size, a desideratum much wanted in lithography. The invention of zinchography has received the sanction of the Royal Academy of Paris, and we understand that M. Breugnot has sold the patent for Great Britain to Mr. John Chapman, of Cornhill, who feels confident that he shall be able to adapt this improvement to every department in the art of engraving. In Paris, they have already succeeded in printing large window blinds with one plate, and we believe experiments have been made on silk and cotton, which warrant the supposition that zincography will soon be applied in our silk and cotton printing establishments.—[Morning Herald.]

Cure for a Bad Appetite.—An Irish Student complained to a friend, a few evenings ago, that he had ost his appetite, when the latter recommended him to eat oysters in the forenoon, which would restore it. Some time after the student met his friend, and upbraided him with the folly of his receipt, by stating that he had eaten a hundred of oysters, as desired, but did not find that his appetite was a bit better than it was before he had eaten them.—[Dublin paper.]

A mine of silver and copper has been discovered in the environs of Pernwelz, district of Tournay, Belgium. The discoverers have applied to the government for leave to work it, but nothing has yet been determined.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of tho above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

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☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—New York Farmer and American Gardener's Magazine; Mechanics' Magazine and Register of Inventions and Improvements; American Railroad Journal and Advocate of Internal Improvements; and the New-York American, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany.* tf

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Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maidenlane.

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NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

In Moore's Philadelphia Price Current, we find it stated that the increase of Wool in the United States for the last two or three years, has been estimated at the rate of 20 per cent. per annum. The amount of wool raised last year and brought into market, was about sixty millions of pounds—this year it is probably seventy five millions, and next year it will be ninety. England produces one hundred and sixty millions pounds annually, and as all her grazing lands are taken up, she cannot be expected to produce much more.

The United States then at the present rate of increase, will soon take the lead in amount, and very probably in quality, and with so vast a territory adapted for sheep grazing, will become the great wool maker of the world.

The sheep which are fed on the wild aromatic herbs in Luxemburg, are small, (as in all mountainous countries,) but celebrated for the delicious flavor of their flesh. The breed is nearly the same as that in the Ardennes, which was introduced into Scotland above a century back, and the race only declined within the last thirty years, when a larger and more profitable breed for the farmer was brought from England. A celebrated *gourmand* of the north, however, retained his favorite mutton till his death, very lately; a short time previous to which he observed, that "life was not worth holding since the breed of the Ardennes sheep was become extinct."

We learn from a Montreal papers that the British Government has given a decision in favor of allowing American Beef and Pork salted, to be exported from the Canadien ports to other British ports, duty free. This will enable the West Indies to obtain their articles of provisions at much cheaper rates than heretofore. The consequence of this decision will be, to create a more extensive demand for Beef and Pork, from New York, Pennsylvania, Ohio, and Michigan, in the Montreal and Quebec Markets.

MECHANICS MAGAZINE.

THE NUMBER FOR OCTOBER 31, will be ready for delivery to Subscribers on Monday next. It contains numerous articles, and a concise account of the FAIR of the AMERICAN INSTITUTE held at NIBLOS' GARDENS, illustrated with numerous engravings.

☞ MECHANICS' and OTHERS who feel interested in endeavoring to abolish the abominable "STATE PRISON MONOPOLY" are requested to forward to the Editor such facts as come within their knowledge, and they will be published if authenticated.

The Mechanics' Magazine and Register of Inventions and Improvements is published by the Proprietors, D. K. MINOR & J. E. CHALLIS, at No. 35 Wall-street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, *in advance*.—JOHN KNIGHT, (formerly proprietor of the London Mechanics' Magazine,) Editor.

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.00—Semi-Weekly, at $4.00 in advance.

The American Railroad Journal, Weekly, at $3.00 per annum.

The Mechanics' Magazine, two volumes a year, at $3.00 per annum.

The Quarterly Journal of Agriculture and Mechanics, at $5.00 per annum, or $1.25 per number.

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The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at $1.00 in advance, now in the 5th volume, bound volumes $1.25.

The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

n6v6 Ctf.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

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By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ½ inch,
200 do. 1½ do. ½ do.
40 do. 1½ do. ⅜ do.
800 do. 2 do. ½ do.
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soon expected.

Flat Bars in lengths of 14 to 16 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2¼, 2⅜, 2½, 3, 3½, 3¾, and 3¼ inches diameter for RailwayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

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Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.,
Germant. and Norrist. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlaem Railroad, now in operation.

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☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

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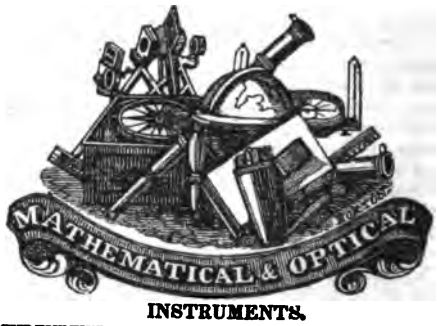
Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18



INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

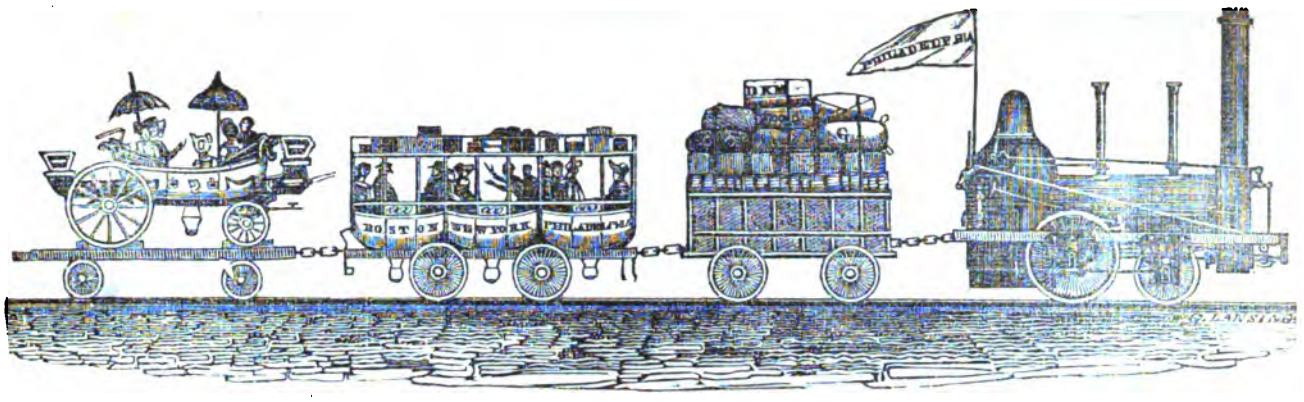
WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m26



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] **SATURDAY, NOVEMBER 22, 1834.** [VOLUME III.—No. 46.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 22, 1834.

We are indebted to J. E. Bloomfield, Esq., of Utica, for the interesting documents which appear in this number of the Journal.

This number of the Journal is devoted almost exclusively to the contemplated steamboat or ship canals, from the navigable waters of the Illinois river to Chicago; from Lake Erie to Ontario, around the Falls of Niagara ; and also from Lake Ontario, at Oswego, to Utica and the Hudson. It is a subject of great national importance, as well as of individual interest, and we therefore take great pleasure in thus laying it before the public.

The report of the Hon. C. F. Mercer, and the letters of Col. Gratiot, and Gen. Duncan, will be found highly interesting, and, together with the field notes of the Engineer, which will be published in our next number, will, as we think, convince the most determined opponents of the work of its entire practicability, as well as of the importance of its early completion.

The report of Nathan Roberts, Esq., of his survey of the route around Niagara Falls, contains precisely the information which the friends of the work have long desired, but which we have only recently received, together with a map of the same, both of which are soon to appear, and would some time since have been published, in pamphlet form, but for the absence from the city of the gentleman who undertook to prepare it for the press.

The reputation of Mr. Roberts as an Engineer will be a sufficient guarantee of the practicability of the work, and also of the approximate cost of a canal of the dimensions of which he speaks; although of the dimensions, we presume, he would now entertain different views from those of 1826.

The more than realization, in the success of the Erie canal, of the most sanguine, and, as they were then termed, *visionary*, anticipations of its friends, must surely satisfy every intelligent man that we shall need, and *must have*, at no distant day, a free and easy communication for steamboats of the largest class between the Hudson and the Mississippi rivers; we ought therefore to make *this* link of it of the required dimensions at once. The locks should certainly be equal in size to those now constructing on the St. Lawrance—200 by 55, and 10 feet deep.

We would call particular attention to the letter of J. E. B., page 728, in reply to a communication signed "Brindley," which appeared in the New-York American on the 7th of October last. "Brindley" crossed the Atlantic for authority to show the impracticability of the measure, when he might, with one-tenth of the trouble, have found much higher authority at home, showing its entire feasibility, and the importance of an early accomplishment of the work.

Brindley is not the first, nor the only, American, who forgets that his own countrymen have merits as well as others. We would by no means detract a particle from the merit to which foreigners are entitled, nor would we withhold from our own countrymen that praise to which many of them are so justly entitled. With regard to the objection on account of a want of water on the summit, we have received a letter assuring us that an examination has been made which puts that question at rest. The supply, it is said, will be ample.

At the Meeting held on Friday evening at the Common Council Room the following resolution was adopted, in reference to the contemplated convention respecting the Rail road.

Resolved, That a committee of twelve persons be appointed whose duty it shall be to attend such meeting or convention as may be appointed in connexion with our fellow citizens in other parts of the country to consult upon our common interets in relation to the route of a Railroad across the peninsula of Michigan, and to report the result of such consultation to a future meeting of the citizens of Detroit.

The following gentlemen were appointed said committee. Hon. J. Biddle, Col. Andrew Mack, General J. R. Williams, Col. Levi Cook, Colonel Henry Whiting, B. F. H. Witherell, E. Farmsworth, E. Gray, J. Norval, O. Newberrs, S. T. Mason, E. C. Matthews.—[Detroit Gourier.]

The New Orleans papers are seriously discussing the subject of a railroad from that city to Nashville. The length of the road is estimated at 500 miles, and it is contended that it may be easily made with the united funds of New Orleans and the States of Mississippi and Tennessee. The distance by water, from New Orleans to Nashville, is twelve days ; by the railroad it would be only two and a half days.

The people of Fredericksburg and its vicinity, at a public meeting held last week, adopted the following among other resolutions :

1st. *Resolved*, That the scheme of a railroad from Fredericksburg to Guyandotte, or some other point on the western waters, is feasible and may be carried into effect, advantageously to the stockholders and to the community.

2d. *Resolved*, That a committee of three be appointed, to draft a memorial to the next Legislature of Virginia, for an act of incorporation.

***Rail Roads.*—It is stated in a late Pensacola Gazette, that a survey of the route for a Rail Road between that place and Columbus, has been made ; and that the Engineer reports the distance 220 miles,—straight and level beyond expectation.**

We mentioned some days since that the People's Line of Railroad Cars and Stages had been established to run between this City and Pittsburgh in 60 hours. The first trip has been made and was run in 57 hours.—[Connecticut Herald.]

From the 21st to the 31st of October, the tolls on the Erie Canal amounted to $75,648,26. The tolls collected upon all the Canals in this State for October, amount to $240,000.

Sixty-one canal boats passed Huntingdon, Pa., during the week ending 3d inst. Fifteen hundred and eighty-four have passed that place during the present season.

A project is now in preparation at Liverpool for establishing a steam communication with India, by the way of the Mediterranean. It is to consist of two flat bottomed steamers, manufactured of iron, which, with their engines, will be transported in a vessel to the coast of Syria, to be there landed, and conveyed by camels to the Euphrates, and then put together. The expedition will be under the direction of Captain Chesney, of the Royal Artillery, having under him an officer and twenty artillery men, and also a lieutenant of the Royal Navy, with two mates, engineers, &c.

MICHIGAN AND ILLINOIS SHIP CANAL.

December 30, 1833.

To the Hon. Chas. F. Mercer,

Chairman of the Committee on Roads and Canals.

Sir: Allow me most respectfully to call your attention, and that of the committee of which you are chairman, to the proposition submitted by me on the 17th day of December, 1833, authorizing "an inquiry into the expediency of a grant by Congress of efficient aid to the State of Illinois, to enable her to construct a steamboat channel from Lake Michigan to the Mississippi river."

It can scarcely be necessary for me to urge the importance of an early completion of this great work to every portion of this Union, connecting, as it would, more than twenty States.

By this small improvement we should secure the most extensive internal steamboat navigation that now is, or perhaps ever will be, known, penetrating, for more than twenty-five thousand miles, the most fertile regions of country on the globe; capable of supplying every part of christendom with every thing necessary to make man independent and happy; and on whose lakes and rivers are seen in increasing numbers the whitening sail and torrent-stemming boat.

Through this channel the sugar, cotton, rice, and tobacco of the South, the lead, coal, breadstuffs, pork, beef, and other products of the West, would pass to the North, exchanged for their salt and timber, manufactures and merchandise.

It is now estimated that there are about 315 steamboats on the Western waters, and about 350 schooners, smaller vessels, and steamboats on the lakes, the increase of which can scarcely be anticipated, when we see that the steamboats have increased from one in 1814 to 315 in 1833, less than twenty years, and the vessels, &c. on the lakes have increased almost as fast.

The commerce carried on on the Western waters was estimated this year at one million seven hundred thousand tons, which is said to have been worth about one hundred and seventy millions of dollars; freights have been reduced from five dollars to thirty-seven and a half cents per hundred from New-Orleans to Louisville; passages and other charges have fallen in the same ratio; the amount and value of the commerce on the lakes can scarcely be estimated, except by the number of vessels engaged in carrying it on, and the unequalled growth and improvement of the whole lake country. It seems to me that national pride, as well as national interest, should press on the accomplishment of this great work.

Of its practicability there can be no doubt, unless the observations of more than one skilful engineer have been deceptive; and it is the shortest and best, if not the only route for the union, by such a channel of these vast navigable waters.

There is a reason for the immediate action of Congress on this interesting subject, which I will respectfully suggest. A portion of the country on the contemplated route of this canal, and on both sides of the Illinois river, is rapidly settling; an extensive commerce is now carried on with New-York, Philadelphia, and Canada, from Chicago, on Lake Michigan, and through the Illinois river, to New-Orleans, and all the West, which is pressing the State for an immediate construction of this work; and I am confident that the next Legislature of Illinois will commence a work of some kind to connect these waters; and, if left to do so with the limited means now at her command, cannot project and finish a communication corresponding with the national utility of the position. Several routes for this canal have been thought of:

First. The route as at present designated, which has been surveyed and thoroughly examined, and is known to be practicable.

Second. The bed of the Des Plaines river.

Third. To enter the Kankakee from fifty to seventy-five miles above the rapids of the Illinois, as it is said to be navigable for that distance, making a canal round the rapids, and to the lake.

The last route, it is thought by some with whom I have conversed, would greatly diminish the expense of the work; and though the distance might be increased, that forms no great objection if steamboats could be used: these, however, will be points hereafter to be settled by the State of Illinois. According to my judgment, there are two ways of affording such assistance as would induce the State to begin and finish a canal of the largest size.

The first would be for Congress to grant the reserved alternate sections of land on the route of the canal, and extend the grant on both sides of the Illinois river, from the canal to its junction with the Mississippi, with the right to select other lands in lieu of such as have been sold by the United States, or which may be unfit for cultivation. With such aid, I have no hesitation in expressing the opinion that the State will immediately commence and very soon complete the work.

By using the lake as a feeder, a sufficient quantity of water can be thrown into the Illinois river so as to secure the passage of steamboats of the largest size at all seasons of the year.

The reason for extending the grant along the river is, that the State may thereby be enabled to improve its channel and banks. The Illinois is one of the most beautiful rivers of the West, and during most of the year is navigable for the largest steamboats; yet in very low water there are several shoals or bars, and obstructions by sunk timber, which should be removed. The current of this river is so slight, that it is in fact a natural canal; and, by improving one or both banks, so as to make tow-paths, would be so used.

I am aware that it may be supposed I am asking too much, and it may be said that the State has not yet expended the original grant. To such I can only say that parsimony in this case, as in all others of like kind, will be a fatal error.

The proposed grants, if made, would of course be on condition that the canal should be as large as I have suggested; and if they be not made, it is perfectly certain that the State will not be able to construct this, or even an ordinary canal, without embarrassing her resources, or contracting a heavy debt, which might, under all the circumstances, be considered doubtful policy, and which the Legislature of the State have heretofore refused to adopt. As the citizens of that country are anxious for some communication between the lakes and the Mississippi, it is much to be feared that the Legislature may authorize the construction of a railroad, which, however valuable, would fall far short, in its utility, of the just expectations of the people, and, in point of national advantages and importance, would bear no comparison with a canal of any kind, but especially such a one as I have suggested.

With you, sir, I need not argue to prove that this is the most important national improvement now to be made in this country; and the time has now arrived when Congress has it in its power to decide whether this link in the vast extent of inland navigation shall be on a liberal or on a contracted scale—shall be made promptly or at some distant day.

I cannot permit myself to doubt the decision, especially when I well know that a large portion of the very land which is asked for, unless a canal be made, will remain for many years, as millions of acres now are, valueless and unsaleable, on the hands of the Government, and that the sound policy in relation to the value and sale of the immense districts of land owned by the United States almost exclusively, thro' which the canal would pass, would be to make the grant.

I do not doubt that the whole grant, nay, three times the amount, would, on the completion of the work, be immediately reimbursed by the increased value and ready sale of the adjacent lands, a large portion of which, from their remoteness from highways and other causes, are now nearly, if not altogether, without value.

The other mode of accomplishing this work would be for Congress to construct it on their own plan, out of the treasure of the nation, and then cede it to the State on the same principles as were contained in the cession of the Cumberland road to Ohio, Pennsylvania, and Virginia, which, I have no doubt, would be acceptable to Illinois, and may be made out of the public treasury with the same propriety that the national road has been made, under the agreement with Virginia that one or more highways should be made from the Northwest Territory to the Atlantic.

These suggestions are made with a view to secure the early accomplishment of this great national work, and on a scale worthy of a great and enterprising people, which, if finished, will, in a single season, and especially in case of a maritime war, more than pay for the cost of its construction to several States in the Union, by the certainty and increased facilities afforded to their commerce.

Among the objections which I have to a railroad, especially at this point, are the following:

The transportation would fall into the hands of a few monopolists. The cost, risk, and delay of transhipment, would be great; and many, if not most, of the articles raised in the country would not bear transportation on a railroad, while all would upon a canal.

If a canal should be made, such as I have spoken of, every man who did not desire to put his material into a steamboat, could use his own craft, his own means, and his own time; could go to market and return with little or no expense; while the citizens of other States, engaged in carrying on a trade, could pass from New Orleans directly into Lake Michigan, without the expense of a transhipment or a moment's delay; and the difference in utility, between a canal and railroad, is not more striking to my mind than that of their comparative durability and value. Experience has shown that railroads grow worse with use, require repairing from the moment they are made, and last but about fifteen years; while canals improve every day, and last forever.

I will not consume your time by showing the perfect practicability of constructing this canal, and at comparatively small cost; but will refer you to the several surveys and reports of engineers, made under the authority of the State of Illinois and of the United States, which leave no doubt upon that subject.

With great respect, your obedient servant,

Joseph Duncan.

In the House of Representatives of the U. S., June 25th, 1834, Mr. Mercer, from the Committee on Roads and Canals, to which the subject had been referred, made the following

REPORT:

The Committee on Roads and Canals, to which was referred the resolution of the House of Representatives, instructing them to inquire into the expediency of affording some efficient aid to the State of Illinois, in the construction of a steamboat canal from Michigan to Illinois river, report:

That they have given to the subject of this resolution all the consideration compatible with a due regard to the numerous topics of inquiry referred to them by the House. The public attention has long been attracted, by Darby and other geographers, to the facility as well as the importance of connecting, by a line of uninterrupted navigation, the Northwestern lakes with the Upper Mississippi. Two modes of accomplishing this desirable purpose have been especially regarded: one, by Green Bay and the Fox and Ouisconsin rivers; the other, by means of Chicago creek and the river Illinois.

Of these routes, the latter possesses a decided advantage over the former, apart from the present condition of the population and improvements of the country to be immediately bene-

fitted by opening such a communication, and the whole of this route is comprehended within the jurisdiction of a single State, one of the largest in territorial extent, and destined, by the fertility of its soil, to be one of the largest, in point of numbers, of the Union. The United States, as the actual proprietor and concurrent sovereign of the national domain adjacent to the lakes, manifested an interest in this route, by an act of Congress of the 30th of March, 1822; which authorized the State of Illinois to open a canal through the public lands, to connect the Illinois river with Lake Michigan. This act empowered the State of Illinois to "survey and mark the route" of such a canal, and, reserving from future sale, vested in that State ninety feet of land on each side of such route as might be approved for that object. A condition was annexed to this grant, that it should become void, provided that the State of Illinois did not survey and return to the Treasury Department a map of the canal within three years from the date of the grant; or, if the canal should not be completed "and suitable for navigation," within twelve years from the passing of the act.

Believing that the contemplated canal would advance the price of the lands in its vicinity, this act "reserved from future sale, till otherwise ordered," every section of the public land "through which the canal route might pass."

By a subsequent act, bearing date the 27th of March, 1827, Congress granted to the State of Illinois, to aid in the construction of this canal, "a quantity of land, equal to one-half of five sections in width," on each side of the route thereof, "reserving each alternate section to the United States;" and subjected the land, so granted, to the disposal of the Legislature of Illinois, under several conditions: among which was, that the canal should be commeneed within five years, and completed in twenty years, or the State should pay to the United States the proceeds of sale of any of the granted lands which she might have sold. By an act of the 2d of March, 1833, amendatory of the last, the State of Illinois is authorized to dispose of the lands before granted, for the purpose of making a *railroad*, instead of a canal, should such be the pleasure of that State, and the time for commencing and completing the canal, or its substitute, the railroad, is extended for five years, under all the obligations of the antecedent acts of Congress, neither of which is expressly repealed.

As the resolution of the House of Representatives, which gives rise to this report, limits its inquiry to the expediency of constructing a steamboat canal, the committee are called upon to consider the relative advantages of such a canal, compared with the railway, which the State of Illinois has been authorized to make in lieu of it.

Of the part of the communication from Fort Mackinac, near the head of Lake Michigan, to New Orleans, in length more than two thousand miles, to say nothing of the vast extent of the steamboat navigation connected with that lake and the various rivers of the Mississippi, the whole is adapted to the use of steamboats of a large class, except the portion between the contemplated harbor of Chicago, at the bottom of Lake Michigan, and the navigable waters of the river Illinois, a distance of ninety-two miles.

Fortunately, as has been said, this obstruction is entirely within the limits of a single State, in fixing whose extended boundaries a former Congress is believed to have had reference to one of the most striking features in the topography of the United States; that, at high water, an imperfect but continuous navigation has always been known to subsist between the river Illinois and the lower extremity of Michigan. On the wisdom and enterprise of the largest western State of the Union, therefore, the efforts to effect a permanent union of the upper lakes with the Lower Mississippi and the mouth of the Missouri will hereafter rest; and the first question which that flourishing commonwealth will be called upon to decide, in fulfilling the national trust thus confided to her, is, by what means shall this union be accomplished? Shall it be by a uniform line of water transit, admitting the delivery of the produce of the lake shores at the ports of the Mississippi from the vessel which first receives them; or shall this produce, of every description, be transferred, by the interposition of a railway, more than 90 miles long, from the lake vessel to the road car, and thence back again to the river boat?

This question, of necessity, involves an inquiry, which would be the cheaper line of transit from Lake Michigan to the highest steamboat navigation of the Illinois river, making due allowance for the expense of transportation; and not that alone, but the cost of storage and of commissions on two translations of the cargo, and its unavoidable exposure to deterioration, hazard, and waste. With regard to certain commodities, such as coal, lime, and lumber, the weight of which is very great in proportion to their value, as well as several manufactures of an opposite description, such as of china, glass, and furniture, liable to breakage from frequent and rough handling, these transhipments merit serious consideration. Bituminous coal, of soft texture, however excellent as fuel, loses, it is known, much of its value by being shovelled and thrown from one vessel into another: and boards are often split in the usual mode of transhipping them. Other commodities are liable to injury from being wet, as salt, sugar, and dry goods; and especially, if transported considerable distances after being so. Lime, from such exposure, would be involved, with its accompanying cargo, in yet more serious danger; and would extend that danger to the vessel or carriage which contained it. The weight of some of those commodities is, moreover, liable to be much increased by moisture, a circumstance calculated to effect directly the cost of their transportation. But setting aside all these minute but important details of actual experience, does a rational doubt any longer obscure the question, whether canals, and especially such a canal as is here contemplated, will afford a cheaper line of transit than a railroad, for the distance between Chicago and the head of steamboat navigation on the Illinois river, however perfect its construction? It is believed not.

A prejudice of natural origin pervaded all the first inquiries on this subject. The imagination was led captive by the flying motion of a railroad car, impelled by one of the most powerful agents hitherto discovered by the ingenuity and subject to the control of man. And no one, not insensible to the peculiar character of the political institutions of the United States, who beholds the vast and yet growing extent of the territory which they hold in union, can be insensible of the value of railroads. They are calculated, by the rapid motion which they admit upon their smooth and even surface, to impart to every State many of the advantages of a narrow territory, without subducting from the numbers or wealth of its inhabitants. This advantage, however, so far as its political effect should be regarded, is most important in relation to the transit between the seat of the General Government, and that of each of the several States, and between the capitals of those States—an advantage of incalculable value in a period of public danger.

For the mere transit of commodities, for purposes of commerce only, and especially of that commerce which transfers the heavy agricultural or mineral productions of the interior of the United States from place to place, celerity of motion is far less important than economy or cheapness.

For many of these commodities will not bear a heavy charge upon their transportation; and the most valuable, if imperishable in character, gain no more, by an earlier arrival at market, than the interest on the sum which their sale produces, during the time that would be lost by their slower transit. The mere interest, for a few weeks, days, or hours, on the price of a cargo of coal, that commodity which, more than any other, has contributed to swell the revenue of the most productive canals—or upon a cargo of lumber, of lime, or of iron ore, commodities of similar importance in canal navigation—would pay but a very small, scarcely a nominal advance on the freight of any one of those bulky commodities. And yet, a few hours only, certainly less than a single day, would be saved in a distance of ninety miles, by substituting a railroad for a canal between the navigable waters of the Illinois and the harbor of Chicago.

A much greater difference, it is believed, would be found to arise in favor of a water transit, when compared with that by a railroad, from the superior economy of the former.

The opinion, that, in their construction, canals cost more than railroads, notwithstanding the authority of certain English writers, as Wood and Tredgold, has been exploded in America by experience, the best test of truth, in relation to all matters of practical economy. Those writers, aware that the efficiency of a given moving power upon a well constructed canal, at low velocities, is at least three times as great as on a perfectly level railroad, to balance this advantage of the former over the latter, estimated the cost of a canal at thrice that of a railroad.

It is remarkable that, while these authorities continue to be read and quoted, to subserve the same purpose in America as in Great Britain, the Liverpool and Manchester railroad remains the only instance of the application of this mode of commercial intercommunication or exchange, between any of the *great cities* of that populous, rich, and flourishing island. Except the Stockton and Darlington railroad, employed almost exclusively in the transportation of coal, this road is also the only one in Great Britain the stock of which is above par; and this, too, in a money market, in which the legal rate of interest does not at any time exceed four per cent. per annum.

The length of this railroad is very little more than thirty miles; its cost, with its appurtenances, it is seen by the last semi-annual report of the Liverpool and Manchester Railroad Company, exceeds a million of pounds sterling; and the price of carriage upon it for merchandise is 10*s.* 3*d.* sterling per ton; for each passenger 4*s.* 7½*d.* sterling, for the distance of thirty miles. The outlay of the company, in effecting this transportation, has not, in a series of years, been, at any time, less than 7*s.* 6*d.* sterling for each ton of merchandise, and 2*s.* 0½*d.* sterling for each passenger. As this outlay of the company comprehends no charge whatever for its large expenditure, it is an item which, in measuring the relative economy of carriage by railroads and canals, should be brought into immediate comparison with the cost of transportation, or the freight only of the carrier, exclusive of the tolls, on a canal.

The freight for transportation will be found to vary on different canals, decreasing with the increase of their dimensions, and the consequent reduction of the resistance of the moving boat, which, under five miles per hour, is as the square of its velocity.

Two men, a boy, and a horse, suffice to move, at the rate of three miles an hour, a boat of fifty tons, and, aided by a second horse, of one hundred tons, on a broad and deep canal. The same force is required for moving a boat of thirty tons, at the same speed, on the Erie canal of New-York, or, if the additional horse be allowed, of fifty tons. Hence the superior economy of large canals, when compared with those of smaller dimensions. But assuming the cost of transportation upon the Erie canal as one term of the proposed comparison, which, with a breadth at the surface of but forty, and at bottom of twenty-eight feet, has a depth of four feet water, and a cent a ton per mile may

be regarded as a just measure of the freight necessary to allow an ample profit to the carrier; a sum which, when compared with the charge incurred by the Liverpool and Manchester Railroad Company, is about one-sixth; a fact which should forever put to rest all controversy on this disputed topic. For the other terms of a comparative estimate of the economy of these rival modes of conveyance, *the rate of toll or profit on them*, it must be recollected, that the profit of any railroad or canal, and consequently its rate of tolls, should bear a certain proportion to the cost of its execution, and the annual expense of its repairs, or of keeping up the capital expended on its construction.

In relation to the cost of the repairs of the best railroads in use, no measure has been supplied by an experience exceeding that of the Liverpool and Manchester Railroad Company.

The last semi-annual report of this company stated the branch of their last six months' expenditure, called the "maintenance of way," by which is meant the repairs of their road, at an amount, which doubled for the year, and turned into American currency, at the present rate of exchange, fell very little short of $2,000 per mile per annum.

It is too obvious to escape notice, that the longer a railroad is used, the greater will be the cost of its annual repairs; while the older the works of a canal, the less will be the annual cost on the same account. Admitting, however, the cost of their repairs to be the same, the only point of comparison remaining to be settled is the relative cost of their original construction.

Facts on this subject are very abundant in Great Britain, and have recently become sufficiently numerous in America, to show that the estimates of the popular writers on the subject of railroads are unfounded in fact.

The Ohio canals have cost about ten thousand dollars per mile; the Erie canal of New-York, exclusive of interest on loans, and the repairs, sometimes blended in the computation of the canal commissioners of that State, with the original cost of the construction of this work, about $18,000 a mile. The Delaware canal o. Pennsylvania, five feet deep, and extending from Easton to Bristol, about 60 miles, cost for its construction about $25,000.

The Chesapeake and Ohio canal, whose cross section exceeds in dimensions by 17 per cent. the double of that of the Erie canal, has cost, so far, for the part above tide water, about $32,000 per mile.

On the other hand, the Baltimore and Ohio railroad has cost as much as the largest of the preceding canals, and the estimate for the branch by which it has been proposed to extend it to the city of Washington, a distance of thirty miles, is near $50,000 per mile. The Newcastle and Frenchtown, the Camden and Amboy, and the Albany and Schenectady railroads, have cost very little, if any thing, short of $30,000 a mile; and the Columbia railroad of Pennsylvania, 82 miles, and the Portage railroad, 36 miles long, it is now known, have cost per mile, the former more than $42,000, and the latter more than $43,000 a mile.

Profiting by the delay of their contemplated enterprise, the Legislature of Illinois will, it is to be expected, profit by the light of experience, and prefer a uniform connexion of the navigable waters of their great river with Lake Michigan, to the construction of a railroad, where nature has afforded facilities so remarkable for a canal communication.

As to the manner of effecting this communication, whether by resorting to a summit above the level of the lake, and feeding from the Des Plaines river, or by an open cut from the lake, of twenty-seven miles, using the lake itself as a feeder; whether this cut shall be reduced in breadth to that required for a single steamboat, with only occasional passways, as on the Dismal Swamp canal, between Virginia and North Carolina, and the largest canal in the world, that from Amsterdam to the Helder, in the Kingdom of the Netherlands; or, by allowing sufficient breadth throughout for such boats to pass every where, on the long line of ninety miles, are questions which the State of Illinois must decide, with reference to the resources which she may be disposed to apply to this great undertaking.

No estimate of the cost of any canal, nor any plan for its construction, accompanied the former survey, map, and report, of the Engineer Department, on the subject of this connexion, transmitted to the House of Representatives on the 24th of May, 1832.

The interesting views of both, furnished to the committee by Gen. C. Gratiot, the chief of that corps, and by a Representative of the State of Illinois, in answer to letters of inquiry from the chairman of this committee, are appended to this report.

Without repeated borings through the earth to be excavated, and a careful examination of the quality of the various materials to be removed, in forming the trunk of the canal, as well as an acquaintance with the quality of the stone and cement to be procured in the excavation, or found in the adjacent country, for the masonry of the canal, no exact estimate can be made of the cost of this work; and so far as its plan should be regulated by its probable cost, this examination should precede any decision on the former.

For the same reason, further aid from the United States, towards the construction of this interesting communication, should be deferred till such an examination and estimate be made; and a plan adopted by the State of Illinois, for the construction of its necessary works. When this plan shall have been fixed, and presented to the consideration of Congress, there can be no doubt that, if approved by them, additional aid will be afforded to an enterprise of such national importance.

ENGINEER DEPARTMENT,
Washington, June 6, 1834.

SIR,—I have had the honor to receive your note of the 16th ultimo, respecting the contemplated canal to connect the Illinois river with Lake Michigan; and regret that almost perpetual engagements have not allowed me to reply to it before. There is nothing on the files of this department relating to this work. A survey of the route was made some time since, and I believe an estimate, but they are lodged in the Topographical Bureau, to the chief of which I beg leave respectfully to refer you. You have been pleased to ask my views of making this a steamboat canal, and I take great pleasure in giving them, although want of sufficient data will not permit me to enter into any thing like detail, or to aim at arrangement in the ideas which I shall offer. This subject has long since attracted my attention; as it has, indeed, that of every person who has reflected upon the rapid developement of the resources of the country through which it is proposed to carry this canal.

By an inspection of the map of the United States, it will be perceived that a connection between the two great valleys of the United States must be created at various points, to enable the people who inhabit them to carry on with each other, and with those of the Atlantic States, the extensive intercourse that must subsist them at no distant day. New-York and Ohio have, by their canals, contributed largely to this Union; the canals and railroads of Pennsylvania, the Chesapeake and Ohio canal, and Baltimore and Ohio railroad, though as yet in their incipiency, have the same object. But of all the projects having this great design, that which contemplates the union of Lake Michigan with the Mississippi by the Illinois river, is, without doubt, both on account of the ease with which it may be accomplished, and the vast extent of navigable waters it will connect, the most important. Its effect will be to unite the St. Lawrence with the Gulf of Mexico; to create a dependence, founded upon mutual interests, between the vast territory watered by the Mississippi, with its extensive tributaries, and that bordering on the Lakes and the St. Lawrence.

There would seem to be, in a position such as this, and to accomplish objects so vast, no question as to which of the usual means, railroad or canal, should be resorted to. The exclusive character of the first; the repeated handling of the commodities transported over it, always attended with expense; the complication of machinery, and the consequent liability to accident and detention, as well as the principle of rapid decay, inseparable from the materials used in its construction, seem to offer to my mind objections not to be overcome. A canal, on the contrary, would afford facilities commensurate with the great thoroughfares it would connect, and the vast amount of produce afloat upon them during the greater portion of the year, or in waiting upon their shores. It would be alike open to the merchant with his accumulated products of every region, from the Yellow Stone to the Sabine, from Lake Superior to Quebec, and to the humble farmer upon its very margin, with the less valuable, though to him equally important returns from his little farm. Besides, nature herself seems to have contemplated this mode of connection. The great basin of the lakes, except at its edge, is higher than any point over which the canal will have to pass, and presents the appearance of a great reservoir, specially designed to furnish in superfluous abundance the great desideratum of works of this kind. A writer, well acquainted with the features of that region of country, observes, in the North American Review, vol. 26, page 361: "There is not, perhaps, on the globe, a place where such a mighty physical revolution could be produced with so little human labor, as by opening a communication between Lake Michigan and some of the upper tributaries of the Illinois. The Des Plaines, which is a considerable stream, rises in the country between the Mississippi and Lake Michigan, and, pursuing a sourtherly course, approaches within twelve miles of the lake. The intermediate land is a level prairie, stretching in every direction as far as the eye can reach. Its extreme elevation above the lake is seventeen feet, and that feeble barrier is all that is interposed between this mighty mass of water and the rich valley of the Mississippi, which it overhangs like an avalanche on the summit of the Alps." Such is the country over which this improvement would have to be made. Commencing at the junction of the Rigolet with the Chicago river, it would pass by an easy single cut through this barrrier for a distance of 27 miles, with an average depth of about 20 feet, where it would reach a point in the natural surface of the ground 10 ft. below the usual level of the lake; from this point, it would make the right bank of the Illinois, and enter that stream either at the mouth of the Fox or Vermillion river, passing, in that distance of sixty-two or sixty-five miles, over an almost uniform, gentle, and unbroken slope of two and a quarter feet a mile. The fine valley of the Illinois is skirted by steep and prominent bluffs; those of the right bank being so uniform, and running in a direction so well suited to the purpose, as to give reasonable hopes that the canal may be made to wash their base, and to rest upon the natural surface; thus affording the great advantage with such a supply of water as may be drawn from the lakes, of increasing its width to any desired extent, at no additional, but rather diminished expense. The question here presents itself, what should be the dimensions of the canal? Should they be limited to the present wants of that region of country? Or should they be determined by the admonitions furnished by experience on the New York canal, where the unfortunate mistake in its dimensions is so frequently and severely felt as to have given rise to the project of a ship canal to subserve the same purposes, and the data to be drawn from the heretofore great and rapid

increase of population along the shores of the Lakes, and those of the Upper Mississippi? I think the latter; and when we look to our experience on the Lakes, and see how great has been the spirit of enterprise created by the facilities of intercourse afforded by the comparatively trifling improvements on their southern shores, it really seems that the trade must soon justify almost any dimensions that can well be given. I should, therefore, recommend, most emphatically, that, from the Lake to the termination of the single cut, the width should be 200 feet, and the depth 10; and from this latter point to the debouche into the Illinois, the minimum width should be 100, and the depth at least 6. This would enable the steam and other craft navigating the lakes and the Western waters, to approach a common point, and afford accommodation during the operation of transferring or exchanging cargoes. You are aware that the surface of the lakes is subject to periodical fluctuations; this reach of 27 miles, 200 feet wide, and 10 feet deep, would effectually provide against any inconvenience that might otherwise arise from this cause. It would, besides, readily afford all the water required for lockage in the lower section of the canal, without creating a sensible current on the summit. By this arrangement, the supply of water would be constant and most abundant, however great the draught might be, and would be divested of sediment so common to small streams, particularly in times of freshets, and which makes them so objectionable for the purposes of feeders. The Des Plaines should, therefore, be diverted from its present course, and made to discharge itself into the Chicago river; this would, moreover, be attended with the precious advantage of keeping open the entrance to the harbor at the mouth of the latter stream, by increasing the volume and velocity of the water which passes through it at certain seasons. I regret that I have not the means of submitting an estimate of the cost of this great and important work; but I feel justified by the history of that country, and my own observations, as I passed through a portion of it last summer, in saying that, cost what it may, the wants of the people of that region, and those inhabiting the great valleys referred to, will, ere long, require its construction, and to the magnitude here proposed. The map which will be handed to you by the bearer is one prepared for my private use; I have sent it, believing that it may afford you some assistance; and allow me to request that you will be pleased to return it as soon as you shall have no further use for it.

With great respect, Sir, I am your most obedient servant,

C. Gratiot, Chief Engineer.

To the Hon. Charles F. Mercer, Chairman &c.

Engineer Department.

Washington, June 23, 1834.

Sir: I beg leave to submit, as a supplement to my letter of the 6th instant, the following *estimate* of the probable cost of a canal, of the largest dimensions, from Chicago to the mouth of the Little Vermillion of the Illinois.

The first twenty-seven miles to be one hundred feet wide at the surface, and ten feet deep; and the remaining distance of sixty-five miles to be not less than one hundred feet at the surface, and six feet deep.

From Lake Michigan to the Point where a level line ten feet below its surface will intersect the valley of the Illinois river, is twenty-seven miles, twenty-five of which should not be less than 100 feet wide, and the remaining two in short sections, distributed at convenient distances, to be 200 feet wide, to accommodate boats while detained in exchanging cargoes without interruption to the navigation. As has been stated in my letter, the average depth of the excavation for this section will be about 20 feet. This is assumed, therefore, in the estimate. The whole quantity of excavation, then, will be, on the supposition that the base of the slopes will equal the height, and that the water level will be about midway down the excavation, giving the width of that surface as the width of the section to be excavated,

25 miles, or $44,000 \times 33\frac{1}{3} \times 6\frac{2}{3} = 9,577,772$ c. yds.
2 miles, or $3,520 \times 66\frac{2}{3} \times 6\frac{2}{3} = 1,464,000$ c. yds.

11,041,772 c. yds.

Assuming one-fourth of this, say 2,760,443 cubic yards, to be rock, and the remaining three-fourths, or 8,281,329 cubic yards, to be clay and sand.

On the Chesapeake and Ohio canal the cost of quarrying rock is put down at $81\frac{1}{2}$ cents, and the excavation of earth at $9\frac{9}{10}$ cents per cubic yard, (see page 70, Doc. 18, 1st session 22d Congress.) But as the distance to which, on this canal, the excavation will have to be removed is greater, generally, than on the Chesapeake and Ohio canal, it is supposed that an advance on these rates, of something more than one-half, must certainly cover the expense of this work.

The excavation of rock is, therefore, assumed at 50 cents, and that of clay and sand at 15 cents. We then have for

2,760,443 cubic yards of rock excavation, at 50 cents, .	$1,380,221 50
8,281,329 cubic yards of earth excavation, at 15 cents, . .	1,242,199 35
Cost of summit, 27 miles,	2,622,420 85

From the western termination of the summit to the Little Vermillion, the canal will follow the right bank of the river, keeping as near the bluffs as may be found necessary. Wherever the bluff is used as one of the sides of the canal, but one embankment will be required, thereby saving greatly in the cost of construction; and as it is proposed to secure to this branch of the canal a minimum navigation of six feet, the embankment will require an altitude of eight feet. This will admit, in case of necessity, an increase of an additional foot of water without greater expense. The whole distance of single embankment is 65 miles, to which 25 miles may be added as a full allowance for double embankment, at places where the bluffs recede too far from the axis of the canal: thus, then, we will have 90 miles of embankment to construct.

The dimensions proposed for this embarkment are $2\frac{1}{2}$ yards high, 4 yards wide at top, and $14\frac{2}{3}$ at the base, giving a section of $24\frac{33}{100}$ multiplied by the length, which is 90 miles, or 158,400 yards, equalling 3,933,072 cubic yards at 15 cents, as before stated, $589,960 80.

On the same canal the lockage cost $1,000 per foot lift. Suppose that on account of the greater dimensions to be given to the locks on this canal, and the difficulty of procuring in a new country a sufficient number of good workmen, that each foot will cost $2,500, which may be considered large, then $139\frac{64}{100}$ feet fall will cost $348,100.

Culverts, aqueducts, and other masonry, will have to be constructed at various points, to admit the free discharge from streams that flow into the Illinois. The cost of these cannot at this time be correctly estimated, but is assumed to equal that of the lockage, which must be regarded as high, $348,100.

Add for contingencies, such as diverting the Des Plaines into the Chicago river, pay of engineers, and other unforeseen expenses, 10 per cent. on the foregoing amount, $390,858 16.

Recapitulation.

Cut across summit, . .	$2,622,420 85
Embankment below summit, .	589,960 80
Lockage, ...	348,100 00
Masonry, aqueducts, &c. &c.	348,100 00
Contingencies, . . .	390,858 16
Total estimated cost,	$4,299,439 81

This is submitted with great diffidence, it being but an approximation to what the cost may be found to be on actual construction. I have the honor to be, Sir, your most obedient servant,

C. Gratiot, Chief Engineer.

To the Hon. C. F. Mercer, Chairman, &c.

☞ For the Report of N. Roberts, Esq. on the "Location and Estimates of the Expense of a Ship Canal around the Falls of Niagara," see page 728 of this Journal.

Manchester and Liverpool Railway—The report of the fifth half-yearly meeting of the company has been published, from which it appears that, compared with the corresponding six months of the previous year, the increase in merchandize conveyed along the line has been 7,727 tons, and in passengers 26,255 persons: and that a profit on the half-year's business has accrued of 3,4691*l* 16s 4*d*, which enables the company to declare a dividend for that period of 4*l* 10s per 100*l* share, leaving a reserved fund of upwards of 4,000*l* to meet contingencies. The total expenditure on the construction of the railway and works is stated at 1,132,075*l*, and the net profit between July, 1833, and July, 1834, at 75,577*l*, being at the rate of 9*l* 13s 9d per cent. per annum—[Bell's Weekly Messenger.]

Mr. Hancock's steam carriage is now undergoing the only test that will satisfy the public of its utility—actual regular work upon the road. The road taken partakes of every variety of rough and smooth, hill and dale, with vehicles, horses, and pedestrians on it of every grade; through all this he has continued his career daily for the last two months.—Mr. Hancock began his experiments in 1826, and his experimantal carriage "Infant" was the first steamer that plied for hire on the common roads, in February 1831; since then he has built five others.

From the result of the experiments made in Portsmouth dock yard, in driving and pressing in large iron and copper bolts, a man of medium strength, striking with a mallet weighing eighteen pounds, and the handle of which was forty-four inches long, would *start* a bolt about one eighth of an inch every blow. It required a pressure of 107 tons to press the same bolt down the same quantity of space; but a small additional weight pressed it completely home.—[London Courier Oct. 15.]

An unfortunate accident occurred yesterday, during the trial of a locomotive engine built by Mr. C. Reeder, of this city, for the use of the Ohio Railroad Company. We learn that the engine, at the time of the accident, was undergoing an experiment, under the charge of the maker or his agent, for the purpose of testing its power before being delivered to the Company. It was attached to and in the act of drawing a train of burden cars, when the boiler exploded and killed the Engineer, Mr.——Neff, instantly.—The attendant fireman was injured, but not seriously. No other damage was sustained.—[Baltimore American.]

The Charleston Courier relates a most unfortunate occurrence which recently took place in that vicinity:

The locomotive engine, Augusta, was on her way from Hamburgh, on Saturday last, with a train of 20 cars, loaded with Cotton, three of which were ahead of the locomotive, and the rest followed in the rear. About 3 o'clock on Saturday afternoon, near Windsor, 15 miles this side of Aiken, from some occurrence, which we have not been able correctly to ascertain, the foremost freight car fell in between the rails, and of course forcing the two behind down with it: before the locomotive could possibly be stopped, she was precipitated upon the freight cars, and one loaded car, immediately behind, was also drawn down. We regret to state that the engineer of the Augusta, Mr. Lee Allison, a very worthy young man, and one who enjoyed the perfect confidence of the company, was dangerously wounded in the fall; the lever employed to let off the steam entering his left side, just below the lower rib, and it is feared causing injury to the intestines, and thus rendering his recovery almost hopeless.

In addition to this most unfortunate occurrence, we learn that one man had his thigh broken, and several others were somewhat injured. Immediately after the accident, we understand that medical assistance was afforded to the sufferers, and as soon as the information reached town, two eminent physicians were despatched to their aid. At the time our informant left (5 P. M.) Mr. A. was perfectly collected, and although we fervently hope that the life of this amiable and useful young man may be saved, we regret to say, that the prevalent opinion is that the result will be fatal.

[From the Mechanics' Magazine, for October.]

Seventh Annual Fair

OF THE

AMERICAN INSTITUTE,

HELD AT NIBLO'S GARDENS,

October, 1834.

(Continued from page 713.)

R. H. Oldson, 1st premium for Hobby Horse —a diploma.

New England Crown Glass Company, first premium for Boston Crown Glass—a diploma. Charles Goff, 164 Maiden lane, agent.

B. Bosch, 1st premium for Secretary Book Case & Standing Mirror—a silver medal. Joseph Titcomb, 196 Broadway, agent.

Lowell Company, Lowell, Mass., 1st premium for Hearth Rugs—a silver medal. Stone, Swan & Mason, Pine street, agents.

Powers & Co., Lansingburgh, 1st premium for Oil Cloth—a diploma. T. L. Chester & Co., agents, Broadway.

Charles Attwood, Middletown, Conn., 1st premium for Metallic Pens—a diploma.

A. Denslow, Hartford, Conn., 1st premium for Card Wire, manufactured at the Rainbow Mills—a diploma. John Whittemore, 66 Frankfort street, agent.

William Field, for Vertical Trip Hammers —a diploma.

J. C. Stevens, for a model of a Fire Engine —a diploma.

Bollen, Pollard & Co., Hartford, Conn., for specimens of Box Wood and Ivory Rules—a diploma. Pettibone & Long, No. 4 Liberty street, agents.

Mr. Thompson, 1st premium for Paste Blacking—a diploma.

Wm. Sturdevant, 1st premium for purified Sperm Oil—a diploma.

W. Woolley, first and second premiums for two Surgical Bedsteads—a gold medal. For a full account of this valuable invention see p. 74, vol. iv., of this Magazine.

Dr. Leo Wolfe, third premium on surgical bedsteads—a diploma.

R. & E. Orrell, Providence, R. I., first premium on Weavers' Reeds—a silver medal.

Blake & Brothers, New-Haven, first premium on Escutcheon Latches—a diploma.

N. Hooper & Co., Boston, first premium on Mantel and Astral Lamps—a silver medal. John Nye & Co., 30 South street, agents.

C. Cornelius and Sons, Philadelphia, second premium on Mantel Lamps—a diploma. P. N. Haughwout & Son, 609 Broadway, agents.

M. Lefoulon, fine specimens of Stone Ware —a diploma.

L. Decasse, fine specimens of Fire Brick and Pipes, for conducting water, manufactured at the Salamander Works—a diploma.

Lowell Company, Lowell, Mass., fine specimen of Venetian Stair Carpeting—a diploma. Stone, Swan & Mason, Pine street, agents.

Norwalk Felt Co., Norwalk, for Felt Carpeting and Rugs—a diploma.

P. Luff & Co., fine specimen of Portable Writing Desk and Dressing Case—a diploma.

William Fulcher, splendid inlaid Centre Table, made of American wood—a silver medal.

R. J. Brown, an elegant Marble Centre Table—a silver medal.

Underhill & Ferris, a beautiful Cararra Marble Fireplace—a silver medal.

R. Heinish, Patent Tailors' Shears—a silver medal. J. Andrews, 147 Fulton street, agent.

T. Thomas, for Painting on Glass—a diploma.

Isaac F. Bragg, fine specimen of Penmanship, sent in for exhibition only—a diploma.

A. Macklin, fine specimen of Embossing from Brass Cylinders—a silver medal.

D. Berrien & Co., for superior Smith Bellows, Fancy Brushes and Bellows—a diploma.

E. & J. Fairbanks, a Concentrated Platform Scale—a diploma.

G. Hodges, Andover, Mass., for Flannel made in imitation of Welch—a diploma. Stone, Swan & Mason, agents, Pine street.

J. B. Cheeseman, fine specimen of Pasteboard—a diploma.

Thomas Godwin, fine specimen of Gilding on Glass—a diploma.

Esther R. Cobb, Wrentham, Mass., a very fine specimen of a Lady's Hat, made of rye straw—a silver medal.

Henry Keep, 2 fine specimens of Fancy Tuscan Bonnets—a diploma.

A & S. White, a very handsome specimen of Tuscan Hats, made of foreign materials—a diploma.

F. A. Kipp, & C. Cordes, fine specimen of Starch—a diploma.

Mrs. S. Little, a splendid Feather Bonnet, made of Poll Parrot Feathers—a silver medal.

Sebastian Jaclard, for Wigs, Toupees, &c. —a diploma.

J. M. D. & T. W. Keating, 3 small models of Steam Engine—a silver medal.

Samuel Judd, for specimen of Spermaceti Candles—a diploma.

J. A. Riell, for specimen of Macaboy S nuff —a diploma.

Miss Mason, for specimen of Bead Bag—a diploma.

Miss Clark, several elegant specimens of Worsted Flower, and other ornamental worsted work, together with some handsome specimens of Drawing—a diploma.

Miss L. A. Browere, fine specimen of Wax Fruit and Flowers, and a pair of Transparent Blinds—a diploma.

Miss B. Van Tuyl, a specimen of Gilding on Velvet, and a Landscape Painting in oil —a diploma.

Miss Lucretia Fordham, Brooklyn, aged 14 years, a pupil of the Mechanics' School, a specimen of Worsted Embroidery—a diploma.

W. Williams, a pair of Worsted Lamp Mats —a diploma.

Miss Ann Eliza Constantine, aged 12 years, a pupil of the Mechanics' School, a piece of Shell Embossed Work—a silver medal.

Japanned Ware, exhibited by J. Smith & Son, Nos. 217 Water and 244 Grand streets, to show that Japanning can be and is brought to as great perfection in this country as in the old; and secondly, that the said persons do manufacture japanned goods to compete with the imported; and, thirdly, that old goods which have been in use for many years, so that the japan is almost, or altogether, worn off, can be, by them, (and they are the first that have done it in this city,) be made equal to new. 2d premium—a diploma.

T. Ternan & Co., 1st premium on Japan Ware—a diploma.

F. Reynolds, specimens of Plain Needle Work —a diploma.

Miss Mallison, fine specimen of Wax Flowers—silver medal.

Miss Sarah Maria Street, New-Haven, aged 13 years, one Chair Seat, an elegant specimen of embroidered Canvas—a diploma.

Mrs. Cooke, of New-Jersey, two Shell Boxes, one pair Shell Vases, and one Shell Watch Stand—a diploma.

Miss Thompson, two vases, fine specimen of Wax Flowers—a diploma.

Miss Margaret Fanshaw, a Bed Quilt, containing 16,800 pieces—a diploma.

Mrs. W. R. Addington, a Shell Wreath and Box—a diploma.

Mrs. Baldwin, a Shell Basket—a diploma.

Lorinda Lydaback, a fine specimen of Blue Silk Vest—a diploma.

Robert Ward, fine specimen of Carving, Butcher, and Cook's Knives—a diploma. J. Andrews, 147 Fulton street, agent.

J. Russell & Co., Greenfield, Mass., fine specimen of Socket Chisels—a diploma. Edward Field, No. 1 Platt street, agent.

Edwin Ellis, Attleborough, Mass., Brass Butt Hinges—a diploma. Atwater, Baker & Wilson, No. 8 Platt street.

Wm. Morgan, an ingenious Pocket Pistol—a diploma.

D. E. Delavan, fine specimens of brass Stair Rods, brass and copper Coal Hods, brass Tea Kettle and Stand—a silver medal.

F. W. Widman, Philadelphia, case of splendid Swords—a silver medal.

Timothy Dwight & Son, New-Haven, specimen of Screw Augers—a diploma. Ibbotson Brothers, 242 Pearl street, agents.

Ewin & Heartte, Baltimore, for excellent specimen of Leveling Instruments, and improved Leveling Instrument and a Theodolite Compass—a silver medal.

Wm. J. Young, Philadelphia, for excellent specimen of Railroad Goinometer, an improved Compass, and a Level Goinometer—a silver medal.

John Roach, a fine Barometer, Thermometer, and Hydrometer, in one vertical column case—a silver medal.

Henry Cooke, for a Drill Breast-plate, with a Swivel—a diploma.

U. S. West, for a Bottle Faucet, for tapping a bottle without drawing the cork—a diploma.

N. J. Williams, for Weavers' Shuttles and Reeds—a diploma.

Jeremiah Dodge & Son, fine specimen of Wood Carving, two Stancheons for a Fire Engine—a silver medal.

Wm. E. Stoutenburgh, for a four-light Suspended Lamp and twelve-light Chandelier—a silver medal.

E. S. Scripsure, a centripetal Power Press—a diploma.

O. Parker, for Hydraulic Cement for making durable Cisterns and large Stone Vessels—a gold medal.

Eaton & Gilbert, Troy, a very fine Omnibus —a diploma.

E. & S. S. Rockwell, Patent Vault Light—a silver medal. [See page 91.]

Fredericks & Smith, for a splendid French Chair—a silver medal.

Robert Usher, two fine specimens of Spiced Beef—a diploma.

Delano & Sons, good specimen of Iron Chests—a diploma.

W. B. Green, good specimen of Iron Chests —a diploma.

F. Fossard, for a piece of La Fayette Blue Cloth, a dye substituted for Indigo—a diploma.

Aaron Gilbert, New-Lebanon, one box of Shakers' Herbs—a diploma. Rushton & Aspinwall, 86 William street, agents.

Mrs. Jessie E. Paul, for fine specimen of Cotton Fruit—a diploma.

Miss A. Lewis, for a piece of Embroidery on Canvas—a diploma.

Samuel Allen, one bale of Hemp, raised at Copenhagen, N. Y.—a diploma. Peter Remsen & Co., No. 109 Pearl street, agents.

S. N. Brewer & Brothers, Boston, for specimen of Lozenges. D. & E. L. Perkins, No. 9 Courtland st., agents.

Robert G. Lamphier, Washington city, D. C., for a fine specimen of Seal Engraving—a diploma.

Mr. Charles G. Christman, improved twelve keyed Flute, manufactured at 398 Pearl street, New-York.

The Rev. William Fisher, Meredith, Delaware county, N. Y., specimen of refined Maple Sugar—a diploma.

Refined Sugar, exhibited by H. & J. Stuart—a diploma. Without exception the most excellent and finest sugar that ever came under our notice. We recommend to all house-keepers to examine it for themselves, and we are satisfied it needs no other recommendation. Ladies particularly, will find it a valuable appendage to the tea table, as well as for other domestic purposes.

Madam Doyley, fine workmanship one pair Corsets—a diploma.

Specimen of a Straw Hat, from the manufactory of J. D. Cobb, Wrentham, Mass. The fabric is rye straw, of Wrentham growth, braided by Miss Adeline Pond, and sewed by Mrs. Esther R. Cobb. Its fineness cannot be surpassed. It is a beautiful specimen of American enterprize and industry.

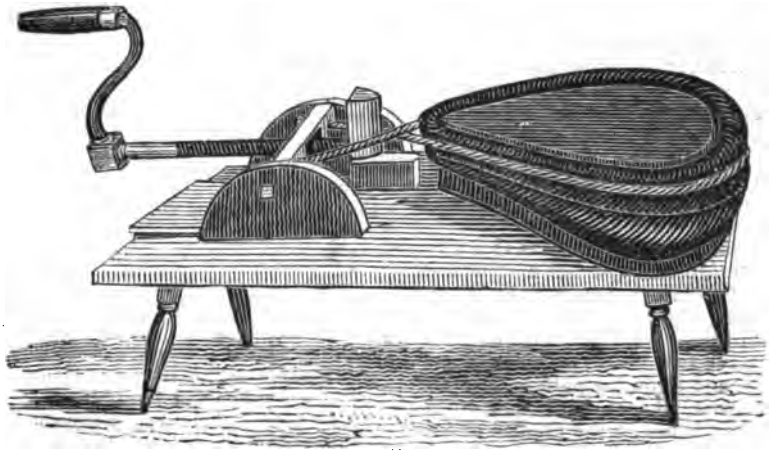
Fancy Glass Working, Blowing and Spinning, by W. J. Hanington, of the American Museum and 450 Broadway.

Birds and animals were made to resemble life; also pans, globe vases, decanters, segar tubes, pipes, glass plumes, and various other articles, formed at the blow-pipe of the glass while in a state of fusion, in the presence of the company. The process of glass blowing in all its varieties, at intervals blown finer than leaf gold, when it bursts with the report of a pistol, forming a shower of glass, frosting, tinted with all the various prismatic colors; glass spinning, on a wheel of multiplying power; by this process red hot glass was spun at the rate of 1000 yards a minute; specimens of ribbons were shown, manufactured from this material; glass balloons, in jars, made repeated ascensions; pulse and spirit glasses, together with philosopher's or water hammer.

H. J. S. Hall, best specimen of Fire-Works—a diploma.

Nathan Post's Patent Hame Collar Blocks, manufactured and sold by Francis S. Lane, No. 279 Bleecker street, New-York.

These patent blocks and rights may be had

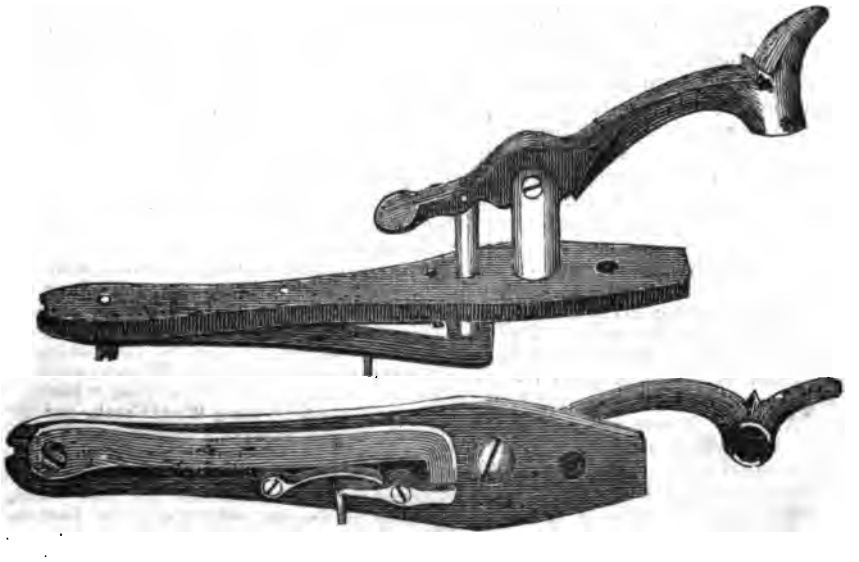


at the place above mentioned, or at the store of Henry Storms, No. 179 Water street, corner of Burling slip, where one may be seen constantly in use. The proprietor of this invention takes pride in offering it to the trade as one of the most important discoveries in crimping and perfecting the hame collar, both with regard to saving labor and producing accuracy of form, that has ever been the subject of a patent.

"I hereby certify that I have used one of the above mentioned blocks for shaping hame collars, and find it to be a great labor saving machine, which overcomes the great difficulty heretofore experienced in making collars, both for the ease of the horse and a sufficient bed for the hame; and I do not hesitate to say that it is particularly worthy the notice of manufacturers. Henry Storms, Saddler."

[The above is doubtless important, particularly when we consider the pain and injury inflicted on horses from the use of ill-shaped hames.]

We have seen a Gun Lock,* invented by a sporting gentleman of Virginia, with which we are much pleased, and, if we are not mistaken, it will supersede the percussion lock now in use. It is styled the "Lateral Percussion Lock," and differs from the lock now in use in having a hammer that plays lateral to and parallel with the barrel on the tube, which is introduced precisely where the touch-hole of a flint gun is usually placed. The interior construction is remarkably plain, not half so complex as the common lock. By the lateral hammer, the upright cock of the flint and the hammer of the percussion gun is entirely done away with: consequently, the top or upper surface of the



barrel presents a smooth and perfectly even appearance. Sight in the flying shot is much more accurately taken by this means, in consequence of the absence of the elevated cock. The facility with which the flint gun can be altered to the percussion is another very great advantage arising from this improvement. The gentleman has promised us a more particular description of the lock, which will be hereafter inserted. [See engravings above.]

* These were intended to be exhibited at the Fair, but arrived in New-York too late.

Ne-plus-ultra, or Mississippi Life Boat, invented by Daniel M. Toll, M. D. of Schenectady. The object and use of the boat being determined upon, ought to govern its dimensions; the hull of one boat is to be constructed of the requisite dimensions, that is to say, of proper width, length, and depth, whose sides, between the curve where the bow commences and the curve where the stern commences, are to be a perfect longitudinal parallelism; her sides, in a vertical direction, are to observe a curvilineal line—they are to be, in other words, a perfect arc of a circle. A cross section of the hull is to be a circular zone, the longest cord of which is to be the transverse line of her deck, and the shortest cord to be the transverse line of her bottom; her bow and stern are to be shaped and modeled in such a manner as will give her, when in motion, the greatest possible relief from positive and negative pressure. Her deck and bottom are to be pierced or perforated with a series of openings, in a lineal direction from bow to stern, of a magnitude in her deck to receive the largest circumference of a hollow sphere or globe, and in her bottom of such diminished dimensions as to receive only a segment of the same globe or hollow sphere. Bulkheads are to be constructed perfectly water tight within her hull, that is, between her deck and bottom, and to join close all around upon the margin of the perforation which is in the bottom of the boat or hull, and carried up and joined close on and all around the margin of the perforation in the deck: this bulkhead is to be shaped as to assume a globular form, and to encompass and give facility for a globe to revolve, which is to be suspended in its chamber: the residue of the perforations and chambers, for the reception of the globes, are to be finished in the same manner: the residue of the whole remaining part of the boat or hull is to be divided off into compartments by perfect water-tight bulkheads: next, a requisite number of hollow globes or spheres are to be made, and of a proper magnitude, mounted with iron axletrees through their axis, and the ends sufficiently projecting to answer for gudgeons; these globes, so mounted with their axletrees, and perfectly water tight, are to be suspended in the above mentioned chambers, fastened and secured in sockets or boxes in a workman-like manner, and with a segment of the globes projecting through the orifice in the bottom of the boat or hull, so that the globes may revolve with facility, to enable them to carry the boat over the shoal or bar with facility; this one boat or hull, now considered finished, another, of the same dimensions, and built every way in the same manner, is to placed by her side and parallel with her, and at a proper distance: these two twin boats are to be connected with suitable cross-beams and timbers, supported a sufficient height above deck with stancheons, and the whole well secured with proper braces and fastenings in a workman-like manner, the whole of which will constitute the float or bottom of my boat.

The above described boat is intended should be built either of iron or of wood, or of iron and wood combined, or of any other material; she is intended to be used for passage or freight, or any other use that any other boat is used for, and she is intended to be moved by any tractile or motive power. And further—on the above float or bottom of my boat, a superstructure is to be erected, as fancy or necessity may direct or dictate. And again, it is the intention of the inventor, that the stern of each of the twin boats should be carried back the requisite length, in imitation (or nearly so) of an eel's tail, so as to give her run a clean, smooth exit, with the least possible distress from negative pressure when in motion; her bows are to be carried forward so as to assume the most elegant tapering form, thereby enabling her to separate the resisting particles in the most easy manner, to give relief to positive pressure.

The invention and improvements herein contemplated consist in giving additional security to my water wheel, by being placed between the twin boats, and by obtaining buoyancy and speed, and likewise by giving facility to the crossing of shoals or bars in shallow water by the rolling and revolving of the globes on their axles, and likewise by securing and retaining the buoyancy of the whole of the uninjured

part of my boat as a compensation for the loss of that part which might be pierced or penetrated by the impetus of a snag or any other substance.

The objections that may be raised or suggested to her speed, in consequence of the projections of her globes through her bottom, will yield on the least reflection, for as soon as the resistance amounts to the sum of the friction on the axletrees, the globes will revolve and thereby relieve the resistance.

And again—the apprehension that may be had on the score of resistance from the small and slender sheets of water that will be standing around the globes in the chambers, will as readily vanish by reflecting that the cohesion of water is merely nominal.

Observations.—This boat may be built and used without either globes or compartments, where there is plenty of water and no danger of having her hulls pierced or perforated. Again, she may be used with or without her globes, with or without her compartments, or any other way, as the case may require.

Report on the Location and Estimates of the Expense of a Ship Canal around Niagara Falls.

This canal commences at Porter's Store House on the Niagara River, two and a half miles above the Falls, and passes along the margin of the Niagara River, over the State land at Old Fort Slossar, to the village of Manchester; thence, still keeping along the margin, it passes by a summit level of eight miles and sixty-five chains to the eminence near Fort Gray, immediately south of Lewistown. Here the locks commence; and in a distance of one mile and sixty-seven chains are located thirty-two locks of ten feet lift each, making the total lockage at this place to be three hundred and twenty feet; from eight feet below the level of the water at its commencement to the same distance below the water at its proposed termination in the harbor at Lewistown.

As this canal is to connect the navigation of the upper with the lower lakes, (and at some future day perhaps with the Atlantic,) the capacity of its section and the size of its locks have been calculated for the most useful size of vessels navigating those waters. Its section through the earth cutting has been calculated for 36 feet width at bottom, eight feet deep, and sixty feet at the water line; and through the rock cutting, thirty feet in width at water line, with suitable recesses for vessels to stop in while others are passing—of these but two or three will be necessary. The dimensions proposed for the locks are twenty-five feet wide in the chamber, and one hundred and twenty between the gates.

The great utility and increasing importance of this work will require the size of the canal and locks to be of these dimensions, and to be constructed in the most permanent and durable manner; with this view, the locks on this canal are calculated to be built of stone in a strong and substantial manner. In fact, it is believed to be the most economical, as stone of a suitable quality can be obtained from the rock cutting in the immediate neighborhood of the locks. These latter have been so located, that a basin of two hundred feet in length is placed between each combination of five locks for four sets. The others are more scattered to suit the nature of the ground. Immediately adjoining the river will be a combination of six locks, the lowermost of which will terminate in eight feet below the level of the water in the Niagara, which here affords a spacious and safe harbor directly in front of the village.

A comparison has been made of the expense of the route by Gill Creek, and that by Manchester and Niagara Falls; and although this latter route is nearly two miles the longest, yet it will cost less by two hundred thousand dollars than the former by way of Gill Creek, as will appear by the annexed abstract.

An estimate of the expense of constructing the canal from Porter's Store House on the Niagara River by the Gill Creek route to station "41," where it intersects the Manchester line at station "71," (see the accompanying map,) a distance of two hundred and fifty chains, is found to be $445,938.31, with no allowance for recesses and tow-path, calculated in deep cutting at fourteen feet high and ten feet wide.

An estimate of constructing the canal from the same point as before, along the margin of the Niagara River through Manchester to the same point as above, a distance of four hundred and twenty-two chains, is found to be $228,759.59,—being a difference in favor of this latter route of $217,178.72; in addition to which, the rock on this latter route is of a description to be easily blasted and drained.

It is proper also to remark, that on the Gill Creek route only the first 36 chains is calculated at 36 feet wide at bottom, with the usual slopes; the remainder 214 chains is through a hard rock, and is taken at 30 feet wide.

On the Manchester route the canal is all calculated at the full size, (36 feet bottom width, with slopes of 18 inches base to 12 inches rise,) except through the rock cutting on Pierce's farm, and through the clay hill on the Fairbanks' farm. At these two places it is calculated at 30 feet wide, and a towing path 14 feet above the bottom, and 10 feet wide, and through the clay hill a beam on the off-side of 5 feet, and the usual slopes to the surface. These two deep cuts being separated by three-fourths of a mile of canal of the full size, no recess for passing has been deemed to be necessary in them, and consequently there has been no allowance for them in the calculations.

From station "41," where the Gill Creek route and that by Manchester come together, the line passes over ground very favorable for the construction of a canal. There are no steep sideling grounds, and the location can be so made as to admit of every section being perfectly drained. The rock appears to be such as will quarry very easily, and will be of the greatest use in constructing the locks, to the site of which latter the rock cutting is immediately contiguous. From station "41" to the head of the locks at station "82," at Fort Gray, is a distance of two hundred and twenty-four chains, the expense of which part of the line is estimated at $208,668.54.

From station "82" to station "85½," is a combination of ten locks; and as the side hill on which they are necessarily located is very steep, and principally of rock, the average cutting has been taken at 10 feet deep, by 45 feet wide, and estimated at 50 cents a cubic yard. From "85½" to station "87," the hill is more sloping, and a pond of nine chains has been located between the first and second combination of locks, the average cutting of which is about 10 feet, and has been estimated at 25 cents per cubic yard.

From "87" to "90½" are located 10 locks. The hill at this place appears to be nearly free from stone, and owing to the dryness of the soil affords a very favorable scite. The average cutting is 10 feet by 45 for the lock pits, and is estimated at 25 cents per cubic yard. From "90½" to "93" is another pond between the locks. At "93" is one lock; from "93" to "97" the line passes over very favorable ground for a canal; from "97" to "100" is located a combination of five locks. The excavation, principally of earth, is averaged at 14 cents per cubic yard. From "100" to "104" is over a handsome flat, the cutting in which is very favorable.

From "104" to "107" is a combination of six locks; the cutting here will be deep, and by the appearance of the bank of the Niagara River, there will be a considerable proportion of red sand stone; it is, however, not very hard to excavate; the average cutting is estimated at 25 feet, with a slope of one to one.

The locks being calculated at 10 feet lift each, will be 32 in number, and will require 100,000 perches of stone masonry, which, considering the abundance of the materials, are estimated, when laid in the work, at $3.25 per perch, which gives, for 100,000 perches, the sum of $325,000. Foundations, gates, castings, and wrought iron for each lock, is estimated at $900 for each lock, making for 32 locks a sum of $28,800, which, with the masonry, amounts to $353,800 as for the total of lockage.

The total expense of the line from Fort Gray, to its termination in Niagara River, a distance of 147 chains, as estimated in the above calculations, is $54,977.90. And the total expense of the Canal by the Manchester route, (in every way the most desirable,) is

From the starting point to station "41,"	$228,759.59
Thence to the head of locks,	208,668.54
Estimate for locks,	353,800.00
Thence to its termination in Niagara River,	54,977.90
To which add for contingencies, superintendence, &c., 10 per cent,	84,620.60
And it gives a total of	$930,826.63

The whole length of the canal, from its commencement at Porter's Store House, by way of Manchester, to its termination at Lewistown, is 9 miles and 73 chains.

The calculations and estimates of expense for constructing the canal and locks are all reasonable; and it is believed that, for the prices above stated, with good economy and judicious management and superintendence, the Canal could be completed. All of which, together with the size of the Canal and locks, and the preference which is to be given to one or the other of the above described routes, is most respectfully submitted by

NATHAN S. ROBERTS, Engineer.

January 28, 1826.

SHIP CANAL.

We publish with pleasure the following letter from an intelligent gentleman at the West to his friend in this city, which will be read with pleasure by those who desire to promote the interesting project of a Steamboat Canal from Oswego to Utica. It affords a full and able refutation of the arguments urged by a writer in the American, under the signature of "Brindley," against the practicability of the measure.

Utica, Nov. 3, 1834.

To ——— —, ———, Esq.—*Dear Sir*:—I have received your letter, with the resolutions passed at the *Ship, or Steamboat Canal* Convention, held in Utica, the 11th of September last. I am convinced that it is only necessary to discuss the subject, to gain friends to the project.

I perceive a writer in the American, over the signature of Brindley, has attacked the Report of the Chamber of Commerce of your city. The doctrine he quotes, in letters from Mr. Weston, viz. that *small* and narrow canals are preferable to *wide* and *deep* canals, is now entirely exploded. They are no doubt necessary in England, from whence Mr. Weston writes; and where our creeks would be called rivers, and the supply of water so limited; but the error committed by Mr. Weston, when he projected the canal for the New York "Inland Navigation Company," using Wood Creek, and the Mohawk, in part, to make a canal of two feet deep!! (on the line where eight feet water, by one hundred feet wide, is now wanted,) was soon found as much behind the wants of the then Far West—being the county of Oneida, extending from Herkimer to Lake Erie, and sending one member to Congress—as the capacity of the Erie Canal is now too limited for the trade of *our own State*, without great delays, and serious injuries to boats, &c.: this canal actually passing at the time, at Alexander's Lock, west of Schenectady, by an official report, a boat every 12 to 15 minutes during this whole season, day and night, including breaches and Sundays.

If Brindley will judge from past experience, he will have no difficulty in answering the query he makes, as to the capacity of the Erie Canal. When the contemplated double locks shall have been made,

and an additional foot added to embankments, the answer (to judge from past experience, and by the continued rapid increase of the West and "far West"; naturally presents itself—ere fifteen years shall have passed, it will be unable to answer the demands on it from the West, and *probably*, not those from our own state, when we take into view, that within that period of time, we shall have increased to four millions of souls. The necessity, therefore, for a large Steamboat Canal round Niagara Falls (only 8 miles, and will cost about $1,000,000,) and from Oswego to the Hudson, is so apparent, when *we view what our British neighbors are doing on the St. Lawrence*, that even should these two works cost the sum of $9,000,000, as mentioned by Brindley, grounded on the liberal calculation of Judge Wright, since let at from 20 to 30 per cent. less for locks along and in the St. Lawrence, 200 feet long, 55 wide, and 10 feet deep, it should not be considered by our Legislature one moment, although a much less sum will complete this work. From Niagara to Utica, competent engineers have estimated two millions of dollars as covering the *entire expense*, as nearly for the whole of this distance there are natural waters; and there is no question but the Canal can be so constructed as to employ steam to tow barges, and cheapen transportation. Then, when the work is completed to the Hudson, vessels may leave New-York for New-Orleans, as it cannot be long ere the State of Illinois will employ the liberal and sufficient donations by the General Government in lands, to construct a Ship Canal on the magnificent plan (see Congress Documents, No. 546—Map, Survey and Report of Chas. F. Mercer, 25th June, 1834,*) contemplated by Col. Gratiot, United States Engineer: to be 200 feet wide, 10 feet deep, and be fed *by the waters of Lake Michigan!!!* the barrier of sand from Chicago to the Illinois River, 12 miles, being only 8 to 15 feet. Removing this trifling difficulty, and then enlarging the Illinois River to steamboat navigation, *at all seasons of the year*, (by the official estimate) will only cost $4,220,000. The circuit of a large part of the United States may be made, and an inland steam navigation of 25,000 miles be effected with the largest and richest body of land in the world, with a varied climate and products, mutually dependant on each other.

Brindley, although apparently acquainted with the country round Rome, the summit, labors under an error in supposing that the supply of water is not *abundant* for a Ship Canal. The waters and springs for a country 30 miles by 40 miles square, to wit, the E. and W. branches of Fish Creek, and the Black River, can be emptied into the Mohawk at Rome, at a small expense. This fact will, I trust, put Brindley at rest on this subject. A supply for the contemplated route was feared, as he quotes, and, with other causes, produced as a bugbear, to get the Canal to Buffalo, in the famous Canal Report of 2d March, 1811, when Mr. Weston (Brindley's authority) pronounced a Canal, where the Oswego Canal now is, "impracticable!!!" So much for Brindley and his authority, against large Canals.

Such is the increase of the West, in trade and *numbers*, that it exceeds fancy and calculation. We cannot get too many avenues and outlets for this valuable commerce, now in its infancy, as it will increase faster than the facilities to reach the Atlantic *can be made;* and these channels will all produce a revenue equal to the interest on their cost, not excepting even the New York and Erie Railroad, a most important work to the State and City of New York.

The Erie Canal, after deducting 28 1-2 per cent. of tolls in 1833, produced 15 per cent. interest on its entire cost, without taking into view what the State got and is getting yearly in duties from the increased sale of salt, and value added to the land owned by the State.

This year the tolls have been further reduced 25 per cent.; and such has been the increase of trade, even under the derangement of the currency and bank facilities, and with an unfortunate dispute with the Ohio Canal Commissioners, which has turned much trade to Philadelphia, that this year is expected to exceed the ratio of the last year, nine-tenths of the tolls being from our own State. What will the Canal Fund produce when the necessity of the case will cause the State to permit the Utica and Schenectady Railroad to carry goods at canal tolls for rapid and early transportation by steam?

It now nets above a million per annum, and, with the funds on hand, will pay off the entire cost of all our Canals, to this period, *within* four years. Should the tolls then be further reduced, or say half a million of dollars be appropriated to pay the expenses of the State Government, and add $100,000 per annum to the literary fund, we shall still have an income of $500,000; on which we would be warranted in borrowing one hundred millions of dollars, to make such improvements (even should they not pay one cent of income, but experience teaches the reverse,) as the Ship Canals, Southern Railroad, Black River and Orleans Canals.

New York, fortunately, possesses the summit and table lands from the great Lakes to the best port on the Atlantic; and with the capital and facilities now centred in New York, can, by a liberal policy with regard to internal improvements, retain the largest portion of the trade with the far West, which must go to the ocean by the Welland and St. Lawrence Canals, and supply our New England States with bread stuffs, unless we act promptly, or our British neighbors are blind to their own interest—a charge not now to be made, although hinted at in 1811, when the Canal Commissioners feared to let the trade down from Lake Erie into Lake Ontario, and was the main argument with Weston's statement of the "impracticability" of the route on the Oswego River, and want of water on the summit, then urged, since proved incorrect, which prevented the adoption of a Canal, then contemplated, on the steam Canal route, of 60 feet on the surface and five feet deep.

To you I am aware that the subject is not new, but I could not let Brindley's statements pass unexamined and not controverted.

With esteem, yours, truly, J. E. B.

NAVIGATION OF THE RED SEA.—RAILROAD ACROSS THE ISTHMUS OF SUEZ.—It has been mentioned that a sum of money had been voted by the British Parliament for the purpose of ascertaining the practicability of opening communication with India, by means of steam navigation through the Euphrates and the Persian Gulph. It is now announced, that whatever may be the result of the survey, steam will be called into operation in effecting the passage to India, by at least one channel, viz: that by the Red Sea. Mohamed Ali, the Pasha of Egypt, desirous of profiting by the determination of the British Government, has decided on the construction of a railroad across the Isthmus of Suez. It is supposed that a ship may be transported on the railroad, and thus the necessity be avoided of unlading and relading the cargo. Two years are judged to be sufficient for the proposed work; meanwhile, passengers can cross from the Nile to the Red Sea without difficulty or danger; so that when the plan is brought into operation,—and it is intended that it should without delay,—a voyage from London to Bombay may be made in about two months. As numbers of persons in England are desirous of emigrating to Hindostan, they will be likely to avail themselves of this course, rather than the circuitous one by the Cape of Good Hope.

By recent letters from Bombay we learn that most favorable results are likely at last to accure from the mission of Colonel Pottniger in the year 1831, to the Court of Sinde, undertaken by orders from the East India Company. The object of the embassy was to throw open the navigation of the mighty river, the Indus, to the merchants of India and Europe: this point is now gained, and the tolls to be levied on all vessels entering or leaving the Indus, are agreed upon; but this toll is not to be considered as a source of revenue to the traders.—An official communication has been received, we understand, by Colonel Pottinger, from the sons of the late Morad Ali. the new Sovereign of Sinde, by a vakeel or envoy extraordinary; a treaty has been drawn up and forwarded for the ratification of the Governor-General, It would appear that a small British force will be stationed at the mouth of the Indus for the protection of the trade at that place, and to superintend the collection of the taxes. The object thus attained is viewed as one of great national importance, and which, when contemplated in conjunction with steam navigation in the Red Sea, will probably, in no very long time, open a wide field for British enterprise. Too much praise cannot be awarded to Colonel Pottinger for the wise and prudent management of a very difficult negociation.—[Mornng Chronicle.]

Iron Railroad.—A trial has been made in France of a new description of Iron Railroad, the invention of Messrs. Piot and Ronen. It took place a few days ago, near Vincennes, and was considered as successful. The advantage consists in the comparative saving of expense, and the susceptibility of receiving carriages of a very simple construction.

The Rhine.—The Cologne Gazette says—"The steamboats continue to be crowded with passengers. It is calculated that the number of persons who have travelled by the steamboat this year only, between Mayence and Cologne, is above 120,000.

It is worthy of remark, that with all the expence Russia is at in improving her roads, they are not made to join those of Poland to the possessions of Prussia. In their present state the Russian army cannot come within two days' march of the frontier of Prussia.

FOREIGN VARIETIES.

Bronze Medals of the Kings of France.—It is in contemplation in Paris, to strike 74 medals, with a view to illustrate the principal events connected with the French Monarchy. This plan was, in fact, conceived by Louis XIV. Napoleon adopted it with enthusiasm, and Charles the Tenth gave orders for its execution. It is now to be carried into effect by some speculators, but the Minister of the Interior has given his authority for the medals to be struck at the Royal Mint, and some of them have already been struck. The two figures of Louis XIV. and Henry IV., which are finished, are said to be beautifully executed.—[Athenæum.]

Captain Ross's Narrative of his Four Years' Residence in the Arctic Regions will be published in December.

Irishmen in Office.—The three Secretaries o State, Lords Palmerston and Duncannon, and Mr. Spring Rice, are Irishmen; so also are the Marquis Wellesley, viceroy of Ireland; Lord Aylmer governor-general of Canada; Lord Clare, governor of Bombay; Marquis of Sligo, governor of Jamaica: General Bourke, governor of New South Wales; and Sir Dudley St. Leger Hill, governor of Lt. Lucia. The number of distinguished Irishmen high in office is at the present day greater than ever it was in the history of the country.

Mount Blanc.—Dr. Martin Barry, a Scotch gentleman, has just succeeded in an ascent of Mount Blanc. He accomplished it on the 16th September. —[Helvetic.]

The paintings and statues sent to St. Petersburgh, from Dereczyn, the residence of Prince Eustache Sapieha, have been distributed amongst the different Royal Palaces. The statue of Orpheus, by Canova, now forms one of the ornaments of the Hermitage.—The Emperor has presented some of the magnificent vases in porphyry to his brother-in-law, the Hereditary Prince of Prussia.

The separate fund for enabling the British and Foreign Bible Society to supply the emancipated negroes who are enabled to read with Psalters and Testaments falls very far short of the expectation generally entertained: the sum wanted is £20,000, but not more than a forth of this has been subscribed.

Sir John Hobhouse, who has been above three months a Cabinet Minister, is only said to have been twice at his office.

The elder member of the ducal family of Berkenfeld, William Duke of Bavaria, has just ceded his domains at Banz, in the Upper Palatinate, and his appanage of 225,000 florins, to his grandson, Duke Maimilian of Bavaria, brother-in-law of the King. He has reserved for his own use 1,800 florins.

Among the various changes that have lately taken place in the public offices, that of the removal of the Exchequer Office from the Palace yard is one.

The front walls of these houses were erected by Mr. Groves, the architect, who always refused to acknowledge it, in consequence of the ridicule thrown upon its style by the witty R. B. Sheridan: these are now down, and exhibit the old Gothic buildings, formerly the palace of Edward the Confessor, likewise the stabling of the Protector Crom well.

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* All of which may be found in this number of the Journal, except the field notes of the Engineer, which will be published next week.

NEW-YORK AMERICAN.

NOVEMBER 15—21, 1834.

LITERARY NOTICES.

SOPHOCLES.—Translated by T. Franklin, D. D. 1 vol. Harpers' Classical Family Library.—We have here the only seven that have come down to us out of the hundred and thirty plays of the immortal poet who carried the Greek Drama to perfection. "Sophocles," observes the accomplished professor to whom the public is indebted for these translations, "may with truth be called the prince of ancient dramatic poets: his fables (at least, of all those tragedies now extant) are interesting and well chosen; his plots regular and well conducted; his sentiments elegant, noble, and sublime; his incidents natural; his diction simple; his manners and characters striking, equal, and unexceptionable; his choruses well adapted to the subject; his moral reflections pertinent and useful; and his numbers, in every part, to the last degree sweet and harmonious. The warmth of his imagination is so tempered by the perfection of his judgment, that his spirit, however animated, never wanders into licentiousness; while, at the same time, the fire of his genius seldom suffers the most uninteresting parts of his tragedy to sink into coldness and insipidity. His peculiar excellence seems to lie in the descriptive; and, exclusive of his dramatic powers, he is certainly a greater poet than either of his illustrious rivals. Were I to draw a similitude of him from painting, I should say that his *ordonnance* was so just, his figues so well grouped and contrasted, his colors so glowing and natural; all his pieces, in short, executed in so bold and masterly a style, as to wrest the palm from every other hand, and point him out as the Raphael of the ancient drama."

Elevation and purity of style, with great precision and completeness of form in his dramas, and marked distinctness and individuality in his characters, were the qualities which with so critical a people as the Greks, placed Sophocles first among his illustrious cotemporaries. The melting tenderness of Euripides and the savage grandeur of Eschylus—of whom Schlegel says that Tragedy sprang from his head in full armor, like Pallas from the head of Jupiter—seem neither to have delighted the fastidious Greeks so much as the harmonious blending of the great qualities of a dramatic poet, which critics have allowed to meet in Sophocles, and which, notwithstanding the inexhaustible invention of the former and the majestic simplicity of the latter, have secured for the illustrious pupil of Æschylus the preference of the judicious in all ages. The public at large have now an opportunity of becoming familier with the great master of the Greek Drama, whose remains are here given in a form so cheap as to come within the means of every reader. †

THE KNICKERBOCKER MAGAZINE, No. 5, VOL. IV. FOR NOVEMBER.

THE AMERICAN MONTHLY MAGAZINE, No. 20, VOL. IV. FOR NOVEMBER.

The improved and improving character of the first of these periodicals is so generally admitted and commented upon, that it is unnecessary to add our opinion to the general voice. But a bad accident which happened lately to the accomplished Editor of the New Monthly, and prevented the appearance of one of the numbers at the usual time, has attracted our attention particularly to the one before us.—The temporary omission of the October number is amply compensated for by the talent and scholarship displayed in that before us. There is indeed a tone and character about the American Monthly, which if they do not rank it above its competitors, certainly make it stand by itself as a marked, as well as able publication. They spring from the severe taste and ample resources of its editor, who, infuses the soul of a scholar, and spirit of a man of varied talents into his excellent publication. The work has now gone on for nearly two years, continually making new readers for itself, and fixing the predilection of those who always sustained it. We have already taken pleasure in extracting the eloquently written sketches, entitled, "Passages from the life of Mary Queen of Scots," as they have from time to time appeared in this Magazine, and we now give in an abridged form, an attractive article from the same gifted hand. It is entitled

The Queen's Remorse.

The twelfth hour of the night had already been announced from half the steeples of England's metropolis, and the echoes of its last stroke lingered, in mournful cadences, among the vaulted aisles of Westminster. It was then, as now, the season of festivity, the hightides of the banquet and the ball, that witching time of night. No din of carriages, or glare of torches, disturbed the sober silence of the streets, illuminated only by the waning light of an uncertain moon; no music streamed upon the night-wind, from the latticed casements of the great, who were contented, in the days of their Lion Queen, to portion out their hours for toil or merriment, for action or repose, according to the ministration of these great lights, which rule the heavens with an indifferent and impartial sway, and register his brief career of moments, to the peer as to the peasant, by one unvarying standard. A solitary lamp burned dim and cheerlessly, before a low-browed portal in St. Stephen's; and a solitary warder, in the rich garb still preserved by the yeomen of the guard, walked to and fro, with almost noiseless steps, his corslet, and the broad head of his shouldered partisan, flashing momentarily out from the shadows of the arch, as he passed and repassed beneath the light, which indicated the royal residence, distinguished by no prouder decorations, of her, before whose wrath the mightiest of Europe's sovereigns shuddered. A pile of the clumsy fire-arms then in use, stacked beneath the eye of the sentinel, and the dark outlines of several bulky figures, outstretched in slumber upon the pavement, seemed to prove that some occurrences of late had called for more than common vigilance in the guarding of the palace. The prolonged cry of the watcher, telling at each successive hour, that all was well, had scarcely passed his lips, before the distant tramp of a horse, and the challenge of a sentry, from the bridge, came heavily up the wind. For a moment, the yeoman listened with all his senses, then, as it became evident that the rider was approaching, he stirred the nearest sleeper with the butt of his heavy halbert. "Up, Gilbert! up man, and to your tools, ere they be wanted.—What though the earl's proud head lie low, he hath friends and fautors enough in the city, I trow, to raise a coil whene'er it lists them!"—The slumbers of the yeomen were exchanged, on the instant, for the guarded bustle of preparation; and, before the horseman, whose approach had caused so much excitement, drew bridle at the palace gate, a dozen bright sparks glimmering under the dark portal, like glow-worms beneath some bosky coppice, announced the readiness of as many levelled matchlocks.

"Stand, ho! the word—"

"A post to her Grace of England,"—was the irregular reply, as the rider, hastily throwing himself from off his jaded hackney, advanced towards the yeoman.

"Stand there!—I say—no nearer on your life! Shoot, Gilbert, shoot, an he stir but a handbreadth!"

"Tush! friend, delay me not"—replied the intruder, halting, however, as he was required to do—"My haste is urgent, and that which I bear with me passeth ceremony. A letter to the Queen! On your heads be it if I meet impediment. See that ye pass it to her Grace forthwith."

"A letter—ha!—there may be some device in this—yet pass it hitherward." A broad parchment, secured by a fold of floss silk, with its deeply sealed wax attached, was placed in his hand. A light was obtained from the hatch of a caliver, and the superscription, evidently too important for delay, hurried the guards to action. "The Earl of Nottingham,"—it ran—"to his most high and sovereign lady, Elizabeth of England. For life! for life! for life!—Ride, and run, haste, haste, posthaste, till this be delivered."

The chamberlain, so great was considered the urgency of the matter, was summoned from his pillow, and he with no small trepidation, proceeded at once to the apartment of Elizabeth. His hesitating tap at the door of the ante-chamber,—occupied by the ladies whose duty it was to watch the person of their imperious mistress by night,—failed indeed to excite the attention of the sleeping maidens, but caught at once the ear of the extraordinary woman whom they served. "Without there!"—she cried in a clear unbroken tone, although full sixty winters had passed ever her head.

"Hunsdon! so please your Grace, with a despatch of import from the Earl of Nottingham!"

"God's death! ye lazy wenches! hear ye not that man without, that I must close my throat in clamoring? Up, hussies up, or by the soul of my father, ye shall sleep for ever." The frightened girls sprang from their couchee at the raised voice of the angry queen, like a covey of partridges at the yelp of the springer, and for a moment all was confusion.—"What now, ye fools,"—she cried again in harsh and excited accents, that reached the ears of the Earl without,—"Hear ye not that my chamberlain awaits an audience? Fling yonder robe of velvet o'er our person, and rid us of this night gear—So!—the mirror now! my ruff and curch! and now—admit him!"

"Admit him!—An it lists your Grace, it were scarce seemly in ladies to appear thus disarrayed."

"Heard ye—or heard ye not!—I say admit him! Think ye, old Hunsdon cares to look upon such trumpery as ye, or must I wait upon my wenches' pleasure? God's head, but ye grow malapert!"

The old queen had not yet ceased, before the door was opened; and, although the ladies had taken the precaution of extinguishing the light, and seeking such concealment as the angles of the chamber afforded, the sturdy old earl—who, notwithstanding the queen's assertion, had as quick an eye for beauty, as many a younger gallant—could easily discover that the modesty, which had demurred to the admission of a man, was not by any means uncalled for or over squeamish. Had he been, however, much more inclined to linger by the way, than his old fashioned courtesy permitted, he would have been a bold man to delay, for twice, ere he could cross the floor to her chamber, did his name reach his ears in the impatient accents of Elizabeth.—"Hunsdon! I say—Hunsdon! 'sdeath, art thou crippled, man?"

"So! give us the letter—there! Pause not for thy knee, man; give us the letter!"—and tearing the frail band, by which it was secured, asunder, she was in a moment entirely engrossed, as it would seem, in its contents. Her countenance waxed paler and paler as she read, and the shadows of an autumn morning flit not more changefully across the landscape, as cloud after cloud is driven over the sun's disk, than did the varying expressions of anxiety, doubt, and sorrow, chase one another from the speaking lineaments of Elizabeth.

"Hah!" she exclaimed after a long pause—"This must be looked to—see that our barge be manned forthwith, and tarry not for aught of state, or ceremony. Thyself will go with us, and stop not thou to don thy newest fashioned doublet; this is no matter that brooks ruffling!—'Sdeath man 'tis life or death! and now begone, Sir! we lack our tirewoman's service!"

An hour had not elapsed, before a barge, easily distinguished as one belonging to the royal household, by its decorations, and the garb of the rowers, shot through a side arch of Westminster bridge, and passed rapidly under sail and oar, down the swift current of the river, now almost at ebb tide. It was not, however, the barge of state, in which the progresses of the sovereign were usually made; nor was it followed by the long train of vessels freighted with ladies of the court, guards, and musicians, which were wont to follow in its wake. In the stern sheets sat two persons; a man advanced in years,—and remarkable for an air of nobility, which could not be disguised even by the thick boatcloak he had wrapped about him, as much perhaps to afford protection against the eyes of the inquisitive, as against the dense mists of the Thames,—and a lady, whose tall person was folded in wrappings so voluminous, as to defy the closest scrutiny. At a short distance in the rear, another boat came sweeping along, in the crew and passengers of which it would have required a penetrating glance to discover a dozen or two of the yeomen of the guard, in their undress liveries of gray and black, without either badge or cognizance, and their carbines concealed beneath a pile of cloaks. It was Elizabeth herself, who in compliance with the mysterious despatch she had so lately received, was braving the cold damps of the river, at an hour so unusual, and in a guise so far short of her accustomed state.

The royal barge was darting with a speed that

increased at every instant, before the esplanades and frowning artillery of the Tower; the short waves were squabbling and splashing, beneath the dark jaws and lowered portcullis of the traitor's gate, that fatal passage through which so many of the best and bravest of England's nobility had entered, never to return.

Brief as was the moment of their transit in front of that sad portal, Hunsdon had yet time to mark the terrible expression of misery, almost of despair, that gleamed across the features of the queen. She spoke not, but she wrung her hands with a sigh, that uttered volumes of repentance and regret, too late to be availing; and the stern old chamberlain, who felt his heart yearn at the sorrows of a mistress, whom he loved no less than he revered her, knew that the mute gesture, and the painful sigh were extorted from that masculine bosom, only by the extremity of anguish. She had not looked upon that "den of drunkards with the blood of princes," since it had been glutted with its last and noblest victim. Essex, the princely, the valiant, the generous, and the noble—Essex, the favorite of the people, the admired of men, the idol, the cherished idol, of Elizabeth, had gone, a few short moons before, through that abhorred gateway—had gone to die, had *died* by her unwilling mandate.—Bitter and long had been the struggle between her wounded pride, and her sincere affection; between her love for the man, and her wrath against the rebel; thrice had she signed the fatal warrant, and as often consigned it to the flames; and when at length her indignation prevailed, and she affixed her name to the fell scroll, which once executed she never smiled again, that indignation was excited not so much by the violence of his proceedings against her crown, as by his obstinate delay in claiming pity and pardon from an offended but indulgent mistress.

Onward! onward they went. The barge was at her moorings by the water-gate of Nottingham house, and the queen had made her way unannounced and almost unattended, to the sick chamber of the aged countess.

The sick woman had been for weeks wasting away beneath a slow and painful malady; her strength had failed her, and, for days, her end had been almost daily expected. Still, with that strange and unnatural tenacity,—through which the dying sometimes cling to earth, even after every rational hope of a day's prolonged existence has been extinguished—she had hovered as it were on the confines of life and death, the vital flame flickering like that of a lamp,—whose aliment has long since been exhausted,—fitfully playing about the wick, which can no longer support it. Her reason, which had been partially obscured during the latter period of her malady, had been restored to its full vigor, on the preceding evening; but the only fruit of its restoration was the utmost anguish of mental suffering, and conscientious remorse. From the moment when the messenger, whose arrival we have already witnessed, had been despatched on his nocturnal mission, she had passed the time in fearful struggles with the last foe, wrestling as it were bodily with the dark angel; now pleading with the Almighty, and adjuring him, by her sufferings, and by her very sins, to spare her yet a little while; now shrieking on the name of Elizabeth, and calling her, as she valued her soul's salvation, to make no long tarrying. In the opinion of the leeches, who watched around her pillow, and of the terrified preacher, who communed with his own heart and was still, her life was kept up only by this fierce and feverish excitement.

At a glance she recognized the queen, before another eye had marked her entrance. "Hah!" she groaned in deep sepulchral tones—"She is come, before whose coming my guilty soul had not the power to pass away! She is come, to witness the damnation of an immortal spirit! To hear a tale of sin and sorrow, that has no parallel! Hear my words, O queen, hear my words now—and laugh—laugh if you can—for by Him who made us both, and is now dealing with me according to my merits, never! never shall you laugh again! Hereafter you shall groan, and weep, and tremble, and curse yourself as I do!—Laugh, I say, Elizabeth of England, laugh now, or never laugh again!"

For a moment the spirit of the queen, manly and strong as it was, beyond perhaps all precedent, was fairly overcrowed, and cowed, by the fierce intensity of the dying woman's manner. Not long, however, could that proud soul quail to any created thing.

"'Fore God, woman"—she cried—"thou art bewitched, or desperately wicked! What in the fiend's name mean ye?"

"In the fiend's name truly—for he alone inspired me!—Look here—and then—pardon me, Elizabeth of England, in God's name, pardon me."

As she spoke, she held aloft, in her thin and bird-like fingers, a massive ring of gold, from which a sapphire of rare price gleamed brilliantly, casting a bright dancing speck of blue reflection upon her hollow, ghastly features. "Know you"—she screamed—"this token?"

"Where got you it, woman? Speak, I say, speak! or I curse you! Where got you that same token?" The proud Queen shook and shuddered as she spoke, like one in an ague fit.

"Essex!"—sighed the dying countess through her set teeth—"the murthered Essex!"

"Murthered! God's death thou liest!—He was a traitor—done to death—Oh God! Oh God—I know not what I say!"—and a big tear-drop, the first in many a year, the first perhaps that ever had bedewed that iron cheek, slid slowly down the face of Elizabeth, and fell heavily on the brow of the glaring sufferer, who still held the ring aloft, in hands clasped close in attitude of supplication. "Speak"—she said again in milder accents—"speak, Nottingham, what of—of Essex?"

"That ring he gave to me, to bear it to thy footstool, and to pray a gracious mistress' favor to an erring, but a grateful, servant."

"And thou—woman—thou"—absolutely shrieked the Queen.

—"Gave it not to thee—that Essex might die, not live"—was the steady reply—"Pardon me before I die—pardon me, as God shall pardon thee!"

"God shall *not* pardon me—woman—neither do I pardon thee! He—an he will—may pardon thee—but that will I do never! never! By the life of the Eternal, NEVER!" and in the overpowering fury and agitation of the moment, she seized the dying sinner with an iron gripe, and shook her in the bed, till the ponderous fabric creaked and quivered. Not another word, not another sob passed the lips of the old countess—her frame was shaken by a mightier hand than that of the indignant Queen; a deep, harsh rattle came from her chest, she raised one skinny arm aloft, and after the jaw had dropped, and the glaring eyeball fixed, that wretched limb stood erect, appealing, as it were, from a mortal, to an immortal judge.

The paroxysm was over. Speechless, and all but motionless, the miserable queen was borne by her attendants to the barge; the tide had shifted, and was still in their favor, though their course was altered. On their return, they again passed the triumphant fleet of Cavendish, bearing the mightiest sovereign of the world, the envied of all the earth, a wretched, feeble, heart-broken woman, grovelling, like a crushed worm, beneath the bitterest of human pangs, the agonies of self created and self merited misery. A few hours found her outstretched upon the floor of her chamber, giving way to anguish uncontrolled and uncontrollable. Refusing the earnest prayers of her women, and of her physicians, to suffer herself to be disrobed, and to recline upon her bed;—feeding on tears and groans alone;—uttering no sound but the name of Essex, in one plaintive, and oft-repeated cry;—mocking at all consolation:—acknowledging no comforter except despair;—ten long days and nights, she lingered thus in pangs a thousand times more intolerable than those which she had inflicted on her Scottish rival; and, when, at length, the council of the state assembled, in her last moments, around the death bed of a sovereign truly, and not metaphorically, lying in dust and ashes,—she named to them as her successor in the kingdom, the son of that same rival. Who shall say that the death of Mary Stuart went unavenged? H.

THE POLITICAL GRAMMAR OF THE UNITED STATES, 1 vol.—Harpers.—There is but one fault that we can discover in this work, upon a rapid glance at its contents. A political *grammar* should have been got up in a cheaper form, so that it could be disseminated—could be *showered* among the people. The only way upon which the great question of Reform can be carried is to drill the laboring classes thoroughly upon the rudiments of sound politics—upon the constitution itself. To facilitate such an object—to bring political instruction to the aid of political liberty—has been the object of the author of this volume, which he addresses, as a text book, to young men, either in private education or public reading. The intention is perfectly good, as far as it goes; but it might be bettered by reducing the size of the volume and striking off a new edition in the cheapest possible form. Let the people but have political light and political right will follow of a certainty. †

A TREATISE UPON THE PRACTICE OF THE COURT OF CHANCERY WITH AN APPENDIX OF FORMS; by MURRAY HOFFMAN, Esq., in 2 vols. vol 1., 8vo. New York: HALSTEAD & VOORHIES—1833.—In the hope of a review from an abler hand, we have delayed a notice of this work much too long; a circumstance, however, to which the author is probably quite indifferent, since the profession for whose use it was designed, have done it ample and substantial justice by adopting it as their guide in the very important branch of law of which it treats. It is not a disparagement of others to say, that as a learned chancery lawyer, its author has no superior in the country. His long experience and very extensive practice as a master, united with strong judgment, have given to his opinion on points of practice almost the weight and authority of judicial decisions. No man, therefore, could be better qualified for the important task which our author has undertaken, and which he has so well executed; and when his second volume is published it will supply what has long been much needed, a thorough guide to the Chancery lawyer. The volume before us gives evidence of great erudition, and the topics to which it relates are clearly and thoroughly treated. Altho' the work is chiefly of a technical character, yet the general reader will find in the introduction and first chapter a very interesting outline of the history of the Court of Chancery in this State, and of its present condition. In reference to the great ends attained by this Court, the author remarks, with equal eloquence and truth, that "no code of law, no code of jurisprudence, from the crude institutions of barbaric ignorance, to the scientific compilations of modern knowledge, exhibits a system of such pure morality, so consistent with the dictates of a sound, unbiassed reason; so founded upon the everlasting principles of truth; so righteous and so wise. The doctrines of the Court of Equity are the most unrestrained productions of the morality and intellect of man, directed to the regulation of his civil duties, that the world has yet known."—The Annals of the Court of Chancery are of great interest, and its mutations from the most corrupt to the purest tribunal of England, as set forth in Parkes' History of the Court of Chancery, form a striking contrast with its progress in this country, where it has long and purely subserved the best purposes, though even now embarrassed by its immense accumulation of business. To the numerous class interested in its practice, this work will prove an invaluable auxiliary.

Our editorial table, somehow or other, does not exhibit it wonted supply of new publications to-day. But, in lieu of other matter, our readers will not quarrel with us for citing here some extremely interesting passages relating to the life of Mirabeau, which we find given in the number of Blackwood which came last to hand, as entirely original. †

He was born in 1764, and came into the world with such an enormous head, that the first words his father heard when his infant was brought to him was, "*Don't be frightened!*" At the age of three years, the child had the small-pox, which so disfigured and cicatrized his face, that his father writes to his brother, "Your nephew is as ugly as Satan." At the age of seven, he received confirmation; and it was on that occasion, that he made the singular remark for a child, reported by himself: "It was explained to me that God could not make contradictions; for instance, *a stick with only one end.* I asked, if a miracle was not *a stick with one end.* My grandmother never forgave me." Even before this period, the severities of his father towards him began; we find him on all occasions urging his tutor to harshness and rigor: yet he seems, even from his earlier years, to have discovered his wonderful faculties: indeed, his *bon mots* would do honor to a grown man. His father writes, "My son grows fast, his prattle increases, and his face grows uglier every day; he is the ugliest and the wittiest. His mother had been talking to him of his future wife; he replied, he hoped she would not judge him by his *face.* What should she judge you by then, said his mother. The *inside*

will help the outside, was his reply." We find another anecdote, a little posterior, which is quite in character with those sudden bursts of nobleness, which threw a splendor on, and, in some measure, redeemed his after career. "The other day," says his father, in a letter to his uncle, "he gained a prize; it was *a hat,* and turning towards a youth present, who had only a cap, and putting the hat on his head, '*Here take it,*' said he, '*I have not two heads.*' He seemed to me then the emperor of the world. His attitude had something divine; I wept and pondered, and the lesson was to me very good."

Perhaps no child in his infancy ever showed in so remarkable a degree what he would be as a man, as did Mirabeau. The following sentences from his father's letters would seem sometimes to describe the *man.* In one place the Marquis says, "he has a mind all athwart, fantastic, tumultuous, unmanagable, and tending to vice, even before he knows what it is." In another place, "the imp has a haughty heart under the jacket of a child, a strange instinct of pride, noble nevertheless"; an embryo ambition that would swallow the whole world, before it is twelve years old." Again, "he has an intelligence, a memory, a capacity, altogether astonishing; but I know, from the physical conformation of such characters, that there is no making any thing of them; to brutal appetites they will return, and carry them to excess; and as pride never abandons them, even on the wheel, they will make themselves base with the base, vain with the vain, fierce with the fierce; and even pique themselves on surpassing the very hogs; there are excrements in all races." So atrociously does this man express himself when writing of his son, and yet it is impossible to deny him a profound penetration into human nature.

JENNING'S LANDSCAPE ANNUAL—GRENADA.—This costly publication, shown us, among several others of the same kind by Mr. Colman this morning, is so far beyond all of its class in beauty and interest, that we would recommend every person of taste a peep into it. It consists wholly of Moorish Views in Grenada, from drawings by David Roberts, illustrated by Thomas Roscoe.

The American Turf Register and Sporting Magazine, for November, contains its usual variety of matter, and is embellished with a plate, and contains a memoir of the celebrated imported Horse Messenger.

FOREIGN INTELLIGENCE.

TEN DAYS LATER FROM EUROPE.—By the packet ship *Caledonia,* Capt. GRAHAM, arrived on Sunday in 26 days from Liverpool, we have London dates of the 20th and Liverpool of the 21st, inclusive. They contain very little political news of interest.

By this arrival we have the calamitous intelligence of the destruction of five of the buildings in which the two houses of the British Parliament have for ages been accustomed to assemble. The occurrence is attributed altogether to accident, but it very naturally excited the greatest sensation in London.—The loss of the buildings, as architectural productions, are not lamented—for they were both paltry in style, inconvenient in their arrangements, and in every way but little creditable to the national taste; but there were ancient and powerful associations connected with these dusky halls that would render it impossible to contemplate their ruins without emotion. "Here," says Bell's Messenger, "within these walls the most memorable of freedom's battles were fought—here the Great Charter of English liberty was first unfolded for the protection of the people—and here an humble member of the House of Commons—Hampden—dared to brave the power of a royal despot. Within the now bare, blackened, and roofless walls of St. Stephen's Chapel did William Rufus, with the nobles of his court, prostrate himself in prayer, and Edward III. gave to heaven hose which were not devoted to the happiness of his subjects. The House of Lords too—the first Legislative chamber in the world—was not without a host of recollections which rendered it an object of venerable respect in the eyes of the country. Here stood ELIZABETH, in all the pride of regal triumph, announcing the destruction of the Spanish Armada—whose foundering fleet formed the never-to-be-forgotten needle work decoration of the lofty walls;—here WILLIAM III. gave the Bill of Rights to Englishmen;—and here the final words were spoken which gave toleration to the Dissenter, emancipation to the Catholic, and freedom to the slave."

Other journals, though they unite in lamenting the loss of public Records, which is said to be great and irreparable, rejoice in the destruction of "these ugly, dark, inconvenient and unhealthy buildings;" and seem busied alone in devising some new place for Parliament to assemble in. The King it seems, in his good-natured off-hand way, has offered his new palace, but the people want his Majesty to keep this costly toy, and let them have the old palace of St. James. The injury done by the fire, apart from the destruction of invaluable documents, is estimated at half a million sterling.

One of the precious and irreparable relics, which has perished with the House of Lords, is the splendid tapestry which recorded the great achievemen from which the rise of the naval glory of England is to be dated—the defeat of the Spanish Armeda.—That tapestry was executed by the celebratad Francis Spiering, from designs by Cornelius Vroom, and originally belonged to the Earl of Effingham, the Lord High Admiral of England, and Commander in-Chief of the gallant little fleet that swept the colosal Armeda from the seas. It was purchased of the Lord High Admiral by James I., but was not put up in the House of Lords until the Commonwealth, two years after Charles, I. had been brought to the scaffold. The room in which it was originally hung was a smaller room than that which it lately ornamented, and where it was not placed until 1800, the House of Lords having met before the union with Ireland in a room not so large or commodious as that which it has occupied ever since that event, was formerly the Court of Requests. At that time also considerable alterations were made in the House of Commons, in consequence of the accession of a hundred new members.

BURNING OF THE HOUSES OF PARLIAMENT.—Between 6 and 7 o'clock on the evening of the 16th October, a fire burst out from one of the apartments connected with the House of Lords: the burning spread with fearful rapidity, and soon consumed the Houses of Lords and Commons, the Library of the latter, many of the Committee Rooms, the Painted Chamber, and a number of other offices. The house of Mr. Ley, Clerk of the Commons, and all the habitations situated between the Lord's Journal Office, and the Speaker's house, with the greater part of the Speaker's house itself were burnt. The conflagration ultimately extended all round the new front buildings of the Lords, utterly consuming the rooms of the Lord Chancellor, Mr. Courtney, and the other office ranging round to Hayes' Coffee-house.—Bellamy's kitchen and rooms are destroyed, Westminster Hall is saved: and the Courts of Law have escaped, though their roofs were stripped off and water poured in by the engines. Westminster Abbey was untouched, the wind having blown from the S. W. and West. Great exertions were made to preserve papers, records, and books from the Libaries; but as yet it is impossible to say what is the extent of the damage.

The following is the Official Report upon the damage done to the buildings, furniture, &c. of the two Houses of Parliament, the Speaker's official residence, the official residence of the Clerk of the House of Commons, and to the Courts of Law at Westminister Hall, occasioned by the fire on the 19th day of October, 1834, as far as can at present be ascertained.

House of Peers.—The House Robing Rooms, Committee Rooms in the west front, and the rooms of the resident officers, and the Octagon Tower at the south end of the building—totally destroyed.

The Painted Chamber—totally destroyed.

The north end of the Royal Gallery abutting on the Painted Chamber—destroyed from the door leading to the Painted Ghamber as far as the first compartment of columns.

The Library and the adjoining rooms, which are now undergoing alterations, as well as the Parliament Offices and the Offices of the Lord Great Chamberlain, together with the Committee Rooms, Housekeeper's Apartments, &c. in this part of the building are saved.

House of Commons.—The House, Libraries, Committee Rooms, Housekeeper's apartments, &c. are totally destroyed (excepting the Committee Rooms, Nos. 11, 12, 13 and 14, which are capable of being repaired.)

The official residence of Mr. Ley (Clerk of the House)—this building is totally destroyed.

The official residence of the Speaker.—The State Drawing Room under the House of Commons is much damaged, but capable of restoration.

All the rooms from the oriel window to the south side of the House of Commons are destroyed.

The Levee Rooms and other parts of the building, together with the public galleries and part of the Cloisters, very much damaged.

The Courts of Law.—These buildings will require some restoration.

Westminster Hall.—No damage has been done to this building.

Furniture.—The furniture, fixtures, and fittings to both the Houses of Lords and Commons, with the Committee Rooms belonging thereto, is, with few exceptions, destroyed. The public furniture at the Speaker's house is in great part destroyed.

The Courts of Law.—The furniture generally of these buildings has sustained considerable damage.

The strictest inquiry is in progress as to the cause of this calamity, but there is not the slightest reason to suppose that it has arisen from any other than accidental causes.

Office of Woods, &c., 17th October, 1834.

A FIRE at Liverpool on the 10th ult. which broke out in the extensive warehouse in Lawnclet's-hey, in the warehouse of Thomas Dover & Co. and in its progress, burnt 1500 bales of cotton, 900 hhds. of sugar, and 150 hhds of molasses. Loss estimated at 40,000*l*, partly insured. Most of the cotton belonging to Sands, Hodson, Turner & Co. and Robert Wilson.

Mr. Livingston had returned to Paris, and in reply to a *report,* that "in order to put an end to the question of claims between the two Governments, and to counteract the possibility of new obstacles on the part of the Chamber, the Cabinet of Washington will reduce its claims by one-third." The Paris Constitutional of Oct. 14, states that "it has been authorized by Mr. *Livingston,* the American Minister, to declare that he has received no instructions from the Government of the United States to agree to any compromise whatever, relative to the 25,000,000 claimed of France, and further, that Mr. Livingston is sure no such instructions will ever be transmitted to him."

Accounts from Madrid bring the conclusion relative to the exclusion of Don Carlos and his progeny from the right of succession to the throne of Spain. The project of law presented by the government on this subject has been unanimously approved of by the Chamber of Procuradores.

Munich accounts states that the negociations for the marriage of Queen Donna Maria, of Portugal with Augustus, Duke of Leuchtenburg are finally concluded.

PORTSMOUTH, OCT. 18.—This morning the Soho steamer, Capt. Fraser, arrived from Lisbon, having left on Sunday last, at 4 A. M. She brought letters from Oporto, where she stayed four hours, and from Vigo, at which place she was fourteen hours.

A deep and general feeling of regret was becoming very prevalent, both in Lisbon and Oporto, at the death of Don Pedro, it being believed that he was really sincere in his determination to carry on all necessary reforms in the spirit of the charter; which it is much feared Donna Maria will not do, under the tutelage of Tapia and Palmella, who are secretly disciples of the old Absolute school. The Duke of Palmella is the most intimate confidant and adviser of the young Queen. The country continued in a tranquil state. The army was so well disposed towards the present state of the Government, that not the slightest apprehension of disaffection existed, should Don Miguel make the rash attempt again to enter the country. The harvest had been abundant.

There was no later news in Paris from Madrid, than the 9th.

The packgt ship Europe, A. C. Marshal, arrived at Liverpool on the 19th September, having the remarkable short passage of 17 days from this port.

Extract of a letter from Zara, dated August 29:—"The Austrian commercial brig Ciro, in her passage from Venice, observed on the 10th instant, before

sunrise, a ship in flames to the southeast of Scoglie Sansigo. Her captain immediately made all sail for the unfortunate object, and arrived in time to receive the crew, consisting of ten men. She proved to be the American brig Ontario, bound from Mobile, North America, to Trieste. She had been struck with lightning, and the flames spread with such rapidity that it was impossible to overcome them. The Ciro conveyed the crew to the island of Lessina, where the authorities supplied them with the means of proceeding to Trieste.

The Revenue Accounts of England present a decrease on the last quarter, as compared with the corresponding one of last year, of £330,064. The result for the year exhibits an increase of £313,448, as compared with the previous one. This arises principally from the Customs.

The rate of postage on foreign papers has been reduced in England to a moderate sum, so that American newspapers may now be sent there without incurring an unreasonable charge.

A new bridge is about to be erected across the Thames, from the Lambeth to the Westminster side of the river, near the Mill-bank Penitentiary.

The galliant and the spirited Duchess d'Angouleme, whom Bonaparte pronounced to be the only "man" in the Bourbon family, is at present in Hungary. She was at Offen on the 24th of September. Her husband and father-in-law remain in Bohemia.

The Polish inhabitants still suffer from the persecution of the Government. Their torments under the new Minister of the Interior, M. de Rohow, instead of diminishing as they had been led to hope, have been increased. Many persons have been arrested, and put into close confinement. Among them are M. Eugene Syczaniecki and M. Joseph Mikorski, who had been married only a few days. The only crime, it is said, of which they are accused is their having sent relief to some of their unfortunate countrymen in foreign lands.

A letter from Algiers, dated 27th ult., announces the arrival of Mr. Thomas Campbell, author of "The Pleasures of Hope," &c., in that colony.

Mexico.—An arrival at Philadelphia, from Vera Cruz, brings intelligence from Mexico to the 17th of October. Tranquillity continues to prevail throughout the county—but it is the quiet of a despotism, and no one can calculate its termination.—A decided opposition to the government already begins to manifest itself; but it seems it has as yet made but little head.

According to the Censor of Vera Cruz of the 6th October, it would appear that a few prisoners of State had been released from the fortress of San Juan de Ulloa, and among the number were the distinguished Senators, Alpuche and Cueco.

Many distinguished patriots who, trusting to the promises of the Santanistas, with regard to the preservation of free institutions, had remained neutral during the last disturbances, being now unwilling to submit to a political and religious system of intolerance, had also left the country. The Ex-Vice-President Farias, after having been exposed to the grossest insults from an excited mob, during his journey from Mexico to Tampico, had embarked for New Orleans.

The President had made several important nominations in the various branches of the administration, removing from their situations those individuals suspected of devotion to the late federal government.

SUMMARY.

The second Session of the 23d Congress commences two weeks from next Monday. Some of the members are already on their way to the Capital, or have arrived there.

A letter received in Boston, from Marseilles, announces the death of George B. Adams, Esq. United States Consul at Alicant, Spain, Sept. 10. Mr. Adams was a native of Boston, but had resided in Spain for the last eighteen years.

The Governor of Georgia, in his Message to the Legislature, states, that the aggregate amount of the sales of negroes belonging to that State, is one hundred and eighteen thousand one hundred and forty-eight dollars.

The Norfolk Beacon says:—The Lynchburg Virginian describes an extensive cotton factory to be erected in that town; and regards it as the commencement of a new era in that vicinity. We wish success to the undertaking.

Buenos Ayres Steamboat.—The Alexandria Gazette of Saturday says:

"We learn that the steamboat Potomac, formerly running between this place and Norfolk, has been purchased by the Buenos Ayres Steamboat Company of Boston. It is intended to run her between Buenos Ayres and Monte Viedo, and she is to be commanded by Capt. Richard Sutton, formerly of the Marco Bozzaris. The Potomac is now undergoing repairs, and is expected to sail about the 1st of December."

Capt. Sutton has the exclusive steam navigation granted him, by the Legislature of Buenos Ayres, of the river Plata for ten years, and we trust he will make it a valuable mode of travelling between the two cities, and a profitable one to himself, and the owners of the boat.—[Com. Adv.]

Steam-ship Connecticut.—Yesterday afternoon a number of underwriters and others visited, by invitation, this vessel. All were highly gratified, and we have no doubt from the remarks of those on board, that steam vessels navigating the sea will hereafter be taken at the same risk, by insurance companies, as merchant vessels. The Connecticut is copper fastened and newly coppered, and in every respect completely fitted for her intended station, and being substantially planked up under the guards renders her additionally safe as a sea boat. She leaves hence positively on Tuesday, the 18th instant, and has superior accommodations for 100 passengers, about 50 having already taken berths. Her boilers, piston, machinery, &c., are in perfect order; and that no detention for want of fuel may occur, a vessel has already sailed for Key West with a supply of coal for her in case of need. There have been no pains spared to render the Connecticut every way calculated for the trade she is intended for, and we hope her trips between New Orleans, Metamoras and Tampico will equal the most sanguine expectations of her enterprizing owners. She is to be commanded by Captain Meoie, a well known and experienced shipmaster.—[Gazette.]

We listened with much interest to a sermon delivered before the New-York Young Men's Temperance Society, at the brick Church on Sunday week last, by Rev. Dr. Spring. The house was filled at an early hour, and it was with difficulty that all could be accommodated with seats. Although so much has been said upon the subject of Temperance, yet the Doctor threw around it such an interest as to rivet the attention of his hearers. He observed that there were now in the United States seven thousand Temperance Societies, embracing one million two hundred thousand members.—[Com. Adv.]

Col. White, the Delegate in Congress from Florida, who is now in Europe, has written home that the capitalists of England are turning their attention to the establishment of a direct trade from London and Liverpool, to the Florida ports. He mentions one line of vessels already projected to St. Marks and Pensacola, and one to Apalachicola. There is no doubt that the interest of the planters in Florida, Georgia, Alabama, and other States that have access to the ports of the Gulf of Mexico, would be largely benefitted by direct and regular intercourse with Great Britain. Mobile offers inducements of the highest order, and is destined to support a very extensive and constantly increasing commerce.—[Mobile Register.]

Rev. Mr. Mortimer.—We cannot refrain from an expression of sympathy with our Moravian brethren, on the loss of their excellent and venerable minister, the Rev. Benjamin Mortimer, who expired on Monday, the 10th instant, after a short but painful illness, in the 67th year of his age. Mr. Mortimer came to this country from England, in the year 1791. After filling the station of teacher of the United Brethren at Nazareth Hall, Pennsylvania, he commenced his missionary labors among the Indians of this country, which he continued, without intermission, for a period of fourteen years. In 1812 he was called to the Pastoral care of the United Brethren in this city, in which station he remained for seventeen years, in the faithful and affectionate discharge of his duties. The few remaining years of his life he spent in retirement, enjoying the affectionate esteem of a numerous circle of friends of all denominations. He departed this life in humble reliance on the merits of his Saviour, and leaves a deeply afflicted family to mourn his loss.—[Churchman.]

Six of the Nuns of the Charlestown Convent, have joined the Ursuline Nunnery in Quebec.

Great Emigration to the West.—The following extracts, one from the Miami of the Lakes, published in Perrysburg, (Ohio) dated October 21st, another from the St. Louis Republican of October 17th, and a third from an interior town of Missouri, will give our readers some notion of the emigration to the West.

"The number that arrive and depart daily from our town, for the purpose of locating in the valley, is almost incredible. A wag at our elbow, while we were standing upon the porch of one of our public houses in this place, remarked, as we stood gazing at the long train of covered wagons, as they came pouring into the town, that he verily believed "*the whole East had broken up.*" And well indeed he might suppose so, as the spectacle certainly justified the belief. To the farmer in the East, who wishes to better his fortune by emigration, we say, the Valley of Miami is the place for you; near a good and never failing market, and as productive a soil as any part of the West can boast of. In addition to the above, we add that a more delightful region we were never in."—[Miami of the Lake.]

The census just taken shows a population in Detroit of 4910.

The Editor of the New Orleans Advertiser incidentally remarks:—

"The most permanent population of our city does not exceed 50,000, from which deduct 30,000 colored, which will leave a white population of 20,000. Of these we may say 15,000 are Catholics, and 5,000 Protestants—and of these again there are at least 6,000 communicants of the first denomination, and 600 of the latter. There are in all 6 Catholic churches and chapels, attended by, as far as we can learn, 20 priests; 10 Protestant churches, attended by 7 clergymen. The usual estimate, for most religious countries, is, we believe, a church for every 1000 inhabitants."

Business of Franklin, Mass.—It is stated that in the town (or township) of Franklin near Wrentham, Mass. containing a population of about 1,700 persons, the value of the straw hats manufactured by the females is between 75,000 and 80,000 dollars a year.

Dividend.—The Ætna Insurance Company have declared a dividend of four per cent. for the last six months, payable on the 15th inst.

On the late re-organization of the marine corps, eight or ten lieutenants were to be appointed, for which stations there were three or four hundred applicants.

The Rev. Doctor Ludlow, of Albany, has received and accepted a call to the Presidency of the University of Pennsylvania. The departure of this estimable man and distinguished divine, is a source of much regret among the Albanians.

A run upon the Quebec Bank has taken place, and was not over at the last accounts. The Montreal Bank has also been a sufferer by the same operation. In three days the latter has paid out £12,000 in specie. The bills of that Bank are passing for goods at 5s. 2d. and 5s. 6d. only.

[*From the Norfolk Beacon.*]

We are authorized to state that the Rev. Dr. Ducachet has resigned the Rectorship of Christ Church in this borough, and accepted the invitation to the Rectorship of St. Stephens Church in the city of Philadelphia, vacated recently by the death of the Rev. Dr. Montgomery.

The gallopade of Meteors, which kicked up such a flurry in the heavens last autumn, has it seems, been repeated this year upon the anniversary of the first dance. This occasion was anticipated by Professor Olmstead of Yale College and other scientific men. The Professor, who witnessed the phenomenon, assisted by Mr. Loomis, a teacher in the college, and Mr. Haile, a member of the senior class, says that the presence of the moon permitted only the larger and more splendid meteors to be seen. The number of them, though smaller than that of last year, was much above the common average. They began to be frequent as early as four minutes past 1 o'clock, when a fire ball of unusual splendor blazed forth as a signal. From this period they continued to fall at a pretty uniform rate until daylight was far advanced. They estimated that a thousand fell during the night. Their directions were more remarkable than their number, and afforded more unequivocal evidence of the identity of the phenomenon with that of last year. They appeared as before, to radiate from a common centre, and that re was again in the Constellation of Leo.

"In mere externals the Chippewas are not essentially different from other tribes of the Algonquin stock in the Western country. And the points in which a difference holds may be supposed to have been, for the most part, the effects of a more ungenial climate. They are, to a less extent than most of the tribes, cultivators of the soil, and more exclusively hunters and warriors. Living in a portion of the continent remarkable for the number of its large and small lakes, they find a common resource in fish, and along with this enjoy the advantage of reaping the wild rice. Their government has been deemed a paradox, at the same time exercising, and too feeble to exercise, power. But it is not more paradoxical than all patriarchal governments, which have their tie in filial affection, and owe their weakness to versatality of opinion. War and other public calamities bring them together, while prosperity drives them apart. They rally on public danger with wonderful facility, and they disperse with equal quickness. All their efforts are of the partisan, popular kind; and if these do not succeed they are dispirited. There is nothing in their institutions and resources suited for long-continued, steady exertion. The most striking trait in their moral history is the institution of the Totem—a sign manual, by which the affiliation of families is traced, agreeing more exactly, perhaps, than has been supposed with the armorial bearings of the feudal ages; and this institution is kept upwith a feeling of importance which it is difficult to account for. An Indian, as is well known, will tell his specific name with great reluctance, but his generic or family name, in other words, his *Totem*, he will declare without hesitation, and with an evident feeling of pride. None of our tribes have proceeded farther than the first rude steps in hieroglyphic writing; and it is a practice in which the Chippewas are peculiarly expert. No part of their country can be visited without bringing this trait into prominent notice. Every path has its blazed and figured trees, conveying intelligence to all who pass, for all can read and understand these signs. They are taught to the young as carefully as our alphabet, with the distinction, however, that hieregliphic writing is the prerogative of the males. These devices are often traced on sheets of birch-bark attached to poles. They are traced on war clubs, or canoe paddles, bows, or gun stocks.—They are often drawn on skins, particularly those used as back dresses by warriors. They have also other hieroglyphic modes of communicating information, by poles with knots of grass attached to them, or rings of paint, and often antlers, or animal heads suspended by the banks of rivers.—[Schoolcraft's last work.]

FOREIGN VARIETIES.

THE LORD CHANCELLOR'S LECTURES.—*Interchange—Restrictions.*—That production may take place in two different ways,—either as the immediate fruit of native industry, or as something obtained from abroad in exchange for that,—and that whatever tends to direct production and exchange into other channels than those into which they fall when left free and unimpeded causes the industry of the community to be employed to less advantage than it would otherwise be, being once established, it becomes a necessary branch of the inquiry to examine the effects of a system of bounties and prohibitions.

In the least hurtful shape in which bounties and prohibitions can be applied, setting aside the expense of superintendence, they merely occasion a transfer of property, as it were, from the right hand to the left, as if, supposing a pair of shoes and a pair of stockings to be purchased at 5s. each, and government should allow a bounty of 2s. 6d. upon the one, and impose a duty of 2s. and 6d. upon the other. Ten shillings, it is plain, would procure one pair of each; but the maker of the shoes, being enabled by means of the bounty to produce them at half the former cost, would afford to sell them at 2s. 6d., while the maker of stockings, unable to produce them at less than the former cost, must add the 2s. 6d. to their former price, and would not sell them for less than 7s. 6d. Bounties in this country have been mostly applied to the encouragement of the fisheries, not so much with a view to make fish and oil cheap as for the improvement of the shipping interest. This plea I shall examine by and by, merely remarking at present, that if a larger quantity of labor and capital is thus forced in one direction than would naturally flow into it, a loss is occasioned to the community, and if such larger quantity of labor and capital is not so forced in that direction, then the shipping interest is no better with the bounty than without it, and consequently the money is wasted.

Such being the operation of bounties and prohibitions upon the products of the same country, let us see what are their effects when applied to the transactions of one country with another. Admitting that it is desirable to have commodities at as little cost as possible, and admitting also, as has been fully proved, that no commodities will be imported from abroad except they can be obtained at less cost than at home, it must follow, that in whatever degree the business of production and exchange are turned out of the course which they would naturally take, in the same degree the advantages arising from production and exchange are sacrificed, or at least postponed, to something else. Whether there is any thing for which they ought to be so postponed is a consideration not for political economy, but for politics.

Let us suppose that linens might be manufactured on the continent as cheaply as in this country—say at 30d. per yard, but that our government, desirous of encouraging the home manufacture, granted a bounty of 2d. a yard upon exportation. The effect would be, that the French would cease to manufacture linen because they could obtain it from us for 28d., and they might employ the capital thus withdrawn to the production of silk, and England would be paying the expense of transport both upon the linen she exported and the silk she might take in exchange. Thus her means of enjoyment would be diminished. The false reasoning which has led to these equally false principles of foreign trade is, that an increase of production in some particular commodity must be a benefit to the country. Thus the grower of corn or the manufacturer of silk may have persuaded the imposition of restrictions in his favor, because by them he might be enabled to grow more corn or to produce more silk. But the true light in which to view such application would be as to their effect upon the interest of the community at large.

With respect to one great argument in favor of the continuance of bounties and prohibitions—namely, that their withdrawal would occasion great distress—it may be observed, that what is thus lost in one direction is often gained in another. If the withdrawal of the bounty upon the manufacture of silk should cause it to go over to France, it would most likely occasion a rise in the demand for cotton to supply the French. To plead, however, as a barrier to all change, that it would produce distress to individuals, is to put a stop at once to all the talking and writing about the general happiness,—to argue that all alteration, all improvement ought to be prohibited; for what are the events in which the interests of some individuals do not require to be sacrificed? In introducing salutary reforms it is certainly desirable that as little injury should be inflicted as possible, but whenever they appear to stand in competition, it would be contrary to all the rules of enlightened legislation and true morality to sacrifice the greater interest to the less.

A bounty to one portion of the community is necessarily attended with a prohibition to the remainder. Now the granting of a right can never be justified unless the good conferred by it is more than equivalent to the corresponding evil. There is no subject upon which the policy of the restrictive and prohibitive system has been maintained with more obstinacy and sophistry than that of corn. Corn, however, will no longer be imported from abroad than it is cheaper for the community to do so; and if it is right that the community should have the benefit of this cheaper production in other commodities, why should it be denied them in one where, from the greater consumption, the advantage is likely to be of greater importance? Two reasons alleged by the advocates for restriction, which I did not notice in a former lecture, are, first, the power which we should put into the hands of other nations, by giving them the supply of our markets with the first necessaries of life, of reducing us at any time to extremities; secondly, the injustice of denying to farmers and landlords a similar monopoly to that which is in certain cases enjoyed by merchants and manufacturers. As to the first of these arguments, it is by no means established that war would stop our supplies of corn, as was evidenced in the late war, which was perhaps more general, more protracted, and conducted with stronger feelings of animosity than any on the records of history; nor is it yet certain that the country supplying the corn is not almost as dependent upon the other country for a vent for its produce as the purchasing country is for a supply. Besides, if this is to be admitted as a valid reason against the importation of corn, it may be admitted as a valid reason against foreign commerce altogether. The most consolatory conclusion to which the true theory of foreign commerce has given birth is, that nations have an interest in loving one another. Instead of providing against the effects of war by making ourselves independent of other nations, it should be our study, by extending our relations and our concerns with them, to engage their interests in the endeavor to prevent it. With respect to the second argument, it is to be observed, that if it is good for the producers of corn, it is good for every other species of producers whatever: and it moreover supposes some peculiar gain to the merchant and the manufacturer out of the monopoly, and a corresponding evil to the grower of corn, in neither of which suppositions is there the shadow of truth.

Talleyrand.—We have received a book, called the *Life of Prince Talleyrand*, accompanied with a portrait. We have not read it through, but the pages we have read have filled us with disgust.—Theft, the most heartless seduction, murder, and infamous treachery, are amongst the crimes laid to the charge of the eminent person whose history this professes to be. If he have been guilty of these various offences, compared to him the most deprived villains who have expiated their crimes on the gallows—the Burks and the Bishops of our times—are poor contemptable driveller in iniquity. It is not possible that French society, bad as it was before the revolution, could have tolerated such a monster, and it is not possible, if only the tenth part of the crimes here attributed to the person named were true, or possessed the shadow of credibility, that he could be received at this day into any society. All men and all women must shrink from him with instinctive horror, as they shrink from death. If the stories here told be not true, the inventer or compiler of them is more depraved than the individual he describes. In either case it is a disgrace to our literary men that such a work should have found a translator. Our readers, remembering the testimony to Talleyrand's character, borne as well by the Duke of Wellington as Earl Grey, cannot fail to be aware of the caution with which such scandalous anecdotes as those which this book contains ought to be received.—*Courier.* [From the little we have read of the book we are inclined to concur in the judgment which the *Courier* pronounces upon it. It professes to be "neither libel nor panegyric," but the gross caricature which faces the title page, and which purports to be a portrait of Talleyrand, is sufficient to rouse the suspicions of every one that the work is not so free from libel as from panegyric.

The Duke of Wellington's demand of 20,000*l.*, alleged to be due to him for arrears of pay, as Inspector General of the Belgium fortresses, has been refused by the Minister of War, on the ground that his Grace has no claim on the present Government of Belgium, never having been recognized as holding any commission and appointment under Leopold; urging, that had such sum been due to the "Chief of the Holy Alliance," his demand should have been made on the Government of William of Holland, and not on the Belgian Treasury.

In the year 1792 the fatal effects of the system of imprisonment for debt were first pointed out by a committee of the House of Commons, of which Mr. Burke and Mr. Fox were members. The report states that there were in prison 1,957 prisoners, 1,803 wives, and 4,088 children. That for debts under £20 the law charges were £9,250, and the sums received £1,948; and for these debts under £20 there were 610 prisoners, some of whom had been imprisoned nine year for £4 10., and that a woman had died in Horsham gaol, after having been imprisoned forty five years for £19.

On the important subject of poor laws in Ireland, the *Quarterly Review* has the following striking remarks:—"A little more delay, and the great agitator will step in, and, with a transition which to him is easy and natural, will declare himself the advocate of a poor law; and, by forcing it on an unwilling government, secure to himself all the credit and gratitude that must spring from its concession, and thus seat himself more firmly in the hearts and affections of the Irish people. If the government wish to give permanence to the dangerous power which that individual now wields, they cannot take a more direct course than by allowing him this last and greatest advantage over them. While he is yet professedly hostile to it, they might, if not as deficient in decision as in policy, by coming forward with this great measure of practical relief to the mass of the Irish people, alienate them from the agitator and his plots, and win their regard and affections for British connection and the imperial le-

gislature. Will they let the moment go by which must determine the destines of Ireland, perhaps of Britain likewise ?"

Saandham.—"Immortalized by an extraordinary circumstance, Saandham, among foreigners, has unaccountably changed its name to Saardham, probably in compliment to the czar carpenter! The aspect it offers, when approached by Beverwyck, is as singular as the fact which made it so renowned. On a space of less than two leagues, without trees or hills, are crowded 2000 mills, some of which are of a prodigious height. In casting the eye over this moving forest, you behold, at short distances, small standards and flags of different colors, fixed on the tops of houses, with garlands of flowers and ribands interlaced on the wings of the mills whirling in their circuit, while crowns of the most brilliant hues, suspended at the extremities of their sails, describe all larger circles. This is the way by which the Saandhamites announce their marriages; each flag indicates a nuptial, and every mill belonging to the families of the *nouveaux mariés* carries the same trophies. The aristocratic miller, by this means, exhibits his wealth, and attracts his clients and friends. On the same horizon, and in the middle of this joy, the fixed wings of other mills show the deaths of their proprietors."—[Gordon's Belgium.]

Discrimination.—Mr. Baron Bolland, in the course of his evidence in the great will cause at Lancaster, stated, as a proof of Mr. Marsden's sanity, that he, the learned baron, had sent him a volume of his own poems, "which he would not have done, had he conceived him to be a man of inferior intellect." Were Mr. Hazelwood still living, what an additional feather would this be in the cap of the Roxburg club.

On Tuesday week a foot-race took place on Kersal-moor, between the two celebrated jumpers, Benjamin Hart and the "Mountain Stag," for £30 a-side. The distance was 200 yards, and they were to start on the signal of a pistol, which twice missed fire, by which two false starts were made. The third time the Mountain Stag got the start by about a yard; Hart, however, recovered this advantage before they got half the distance, and won cleverly by four or five yards, in the astonishing short space of twenty-one seconds. The betting at starting was 5 to 4 on Hart.—[Manchester Courier.]

Utility of knowing English.—There is a story of an adventure happening to a poor Highlander from not being well acquainted with the English language. He came up to London, and was greatly distressed for want of victuals. One day, seeing a person with a friendly expression of countenance, he stated to him his lamentable case. The man asked him why he did not go to the shop of a penny cook, where it is usual for poor people to get food. It is here necessary to state, that in these shops poor people giving a couple of pence, get a piece of bread, a portion of meat, and half a seer of beer or barley water; this kind of shop is called a penny cook's. The highlander, forgetting the name penny cook, from his ignorance of the language, thought it was *penny cut*, and going further on, he asked where the penny cut shop was. A man (whom he addressed) thought that he wanted to get either his hair cut or to be shaved, and pointed out a barber's shop. The Highlander, going to the shop knocked at the door, and was admited by the barber, who seated him on a chair. The tonsor then filled an ewer with hot water, put a lump of soap into it, and making a lather, placed it on the table before the highlander, and went up stairs for his razors and other shaving apparatus. The Highlander, taking the soapsuds water for broth, began to drink it, and swallowed three mouthfuls; and mistaking the lump of soap for a potato, and being exceedingly hungry, he chewed and ate it. Upon the barber's coming down stairs, and seeing what had happened, he was petrified with astonishment. The Highlander taking two pence from his pocket, laid them on the table, saying, "I am much obliged to you; the broth was very good, but the potato was not sufficiently boiled."—[Old Magazine.]

Local Proverbs.—In the Isle of Man a proverbial expression forcibly indicates the object constantly occupying the minds of the inhabitants. The two deemsters, or judges, when appointed to the chair of judgment, declare they will render justice between man and man as "equally as the herring-bone lies between the two sides;" an image which could not have occurred to any people unaccustomed to the herring fishery. There is a Cornish proverb. "Those who will not be ruled by the rudder must be ruled by the rock;" the strands of Cornwall, so often covered with wrecks, could not fail to impress on the imagination of its inhabitants the two objects from whence they drew this salutary proverb against obstinate wrong heads.—[D. Israeli's Curiosities of Literature.]

Morning Calls.—"The ancient custom of *bonhommie*, paying visits on the first day of the year to your friends and acquaintances, is still kept up at Brussels with great precision. At an early hour, when light is visible, the whole genteel male population of the city is in movement, and every carriage and horse in requisition for the occasion. The pedestrians may be seen crossing each other at every corner, the great contest being, who shall first deliver the cards. A man in good condition will, in the course of the morning's round, *pousser* four score or one hundred billets in these visits. A novel and ingenious mode of acknowledging these calls was adopted this year (1828) by a citizen who, being encumbered with flesh and keeping no carriage, found his physical powers unequal to the task of leaving his name at the doors of his numerous friends in person. He therefore stationed his servant in his hall with a plentiful supply of visiting cards, to be exchanged for these left for him."—[Gordon's Belgium.]

Imposition of Servants.—"The wages of a cook *à la bourgeoise* are ten or twelve Napoleons; a house maid, eight; a footman, from fifteen to twenty. Belgian domestics, though not so expert as English in doing the work of a house, and perhaps more capricious in their tempers, are less dainty in their food, and consequently less expensive; but they contract so many bad habits in the service of the English, that they find some difficulty in again getting placed with their countrymen, and this they tell you with great coolness, and make their demands accordingly.—The cook is so confident that you will submit to be fleeced, that, in engaging with you, she will say, '*Mais, madame, combien pour profit ?*' which, Anglicised, means, 'To what extent may I impose on you ?' "—[Gordon's Belgium.]

Napoleon had a French cook, who undertook to dress a fowl for his Imperial Majesty's dinner, in a different manner every day, for a whole year; he fulfilled his promise, and succeeded in gratifying the Emperor's palate in 365 different ways, every one of which was perfectly unexceptionable.

It is stated in a Havre paper, that Dr. Antomarchi, the medical attendant of Napoleon at St. Helena, and who closed the eyes of that great man, after death had closed his career in his island prison, is about to embark for the United States; where he is to act in the capacity of household Physician to Joseph Bonaparte.

East India Prices.—Cheese brings 87 1-2 cents a pound in India. Ham the same. Raspberry jam readily sells for $5 33 each jar. Salad oil brings $2 66 a pint. A jar of pickles containing two pounds often sells for $15 00. Harness leather is very scarce and produces immense profits.

The rate of postage on foreign papers has been reduced in England to a moderate sum, so that American newspapers may now be sent there without incurring an unreasonable charge.

A small vessel, called the Kaliopapa, named after the King of Otaheite, has brought up to Sydney, 55 tons of sugar made from the sugar cane grown in that Island. It is said to be very fine, and equal in quality to the Mauritius sugar, though not so large in the grain.

The advices from Naples continue to speak of the ravage of the recent eruption. The habitations of 180 families have been swallowed up, and 800 individuals bereft of an asylum. One of the principal dangers during the eruption was, that the inflamable matter would reach the magazine of powder, the explosion of which would have produced incalculable mischief.

General Mina, late an unhappy exile in England, has been reinstated by the Spanish government in his former honors.

The fisheries in the Gulf of St. Lawrence have almost entirely failed.

The Pimento Tree.—One of the most valuable trees of Jamaica is the pimento, which flourishes spontaneously and in great abundance on the north side of the island; its numerous white blossoms, mixing with the dark green foliage, and with the slightest breeze diffusing around the most delicious fragrance, give a beauty and charm to nature rarely equalled, and of which he who has not visited the shady arbors and perfumed groves of the tropics can have little conception. This lovely tree, the very leaf of which, bruised, emits a fine aromatic odour, nearly as powerful as that of the spice itself, has been known to grow to the height of from thirty to forty feet, exceedingly straight, and having for its base the spinous ridge of a rock, eight or ten feet above the surface of the hill or mountain. A single tree will produce 150 of the raw, or 100 pounds of the dried fruit. The indigenous forest and even exotic trees of Jamaica, grow to a prodigious height; the palmetto royal is frequently found one hundred and forty feet; the vast trunks of the ceiba, (wild cotton tree) and fig trees, often measure ninety feet from the base to the limbs, and the trunk of the former, when hollowed out, has formed out a boat capable of holding one hundred persons. There is a great variety of timber for agricultural and household purposes, and some exquitely beautiful cabinet woods.—[Montgomery Martin's History, Volume 2.]

It is related in Bulwer's "France" that at the battle of Jemappe, Dumourier had for his aids-de-camp, two of the most beautiful, the most accomplished young women in the society of the time.—Equally chaste and warlike, these modern Camillas felt a veneration for the profession of arms—they delighted in the smoke of the cannon and the sound of the trumpet. Often a general told me, in the most desperate crisis of the battle, he has heard their slender voices reproaching flight and urging to the charge: "Ou allez-vous, soldats ? ce n'est pas lo l'ennemi! En avant! suivez !" and you might have seen their waving plumes and amazonian garb amidst the thickest of the fire.

TO A LADY, GARDENING.—By Thomas Moore.

O could we do with this world of ours
As thou dost with thy garden bowers,
Reject the weeds and keep the flowers,
What a heaven on earth we'd make it!
So bright a dwelling should be our own,
So warranted free from sigh or frown,
That angels soon would be coming down,
By the week or month to take it.

Like those gay flies that wing through air;
And in themselves a lustre bear
A stock of light, still ready there,
Whenever they wish to use it.
So in this world I'd make for thee,
Our hearts should all like fire-flies be,
And the flash of wit or poesy
Break forth whenever we choose it.

While ev'ry joy that glads our sphere
Hath still some shadow hovering near,
In this new world of ours my dear,
Such shadows will all be omitted:
Unless they're like that graceful one,
Which, when thou'rt dancing in the sun,
Still near thee, leaves a charm upon
Each spot where it hath flitted!

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 94 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by
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UTICA AND SCHENECTADY RAILROAD COMPANY.

Call for Second Instalment on Stock.

THE Stockholders in the Utica and Schenectady Railroad Company are requested to pay on or before the twentieth day of December next, the sum of Three Dollars on each Share of Stock in the Company held by them respectively under the penalty (provided by law in case of non-payment) of the forfeiture of all previous payments made thereon.

Stockholders residing in the city of New York, or within said State and south of the counties of Columbia, Greene and Delaware, are requested to make said payments to the Cashier of the Phenix Bank, at the said Bank in the city of New York; and all other Stockholders in said Company are requested to make said payments to the Treasurer of said Company at the Albany City Bank or at the Commercial Bank, in the city of Albany; but any Stockholder residing west of the counties of Albany, Schenectady or Saratoga may make such payments by depositing the same to the credit of the said Treasurer in the Ontario Branch Bank, in the city of Utica, or in the Herkimer County Bank, at Little Falls, or in the Montgomery County Bank, at Johnstown, provided a certificate of such deposite (with the name of the Stockholder by or for whom such deposite is made) be forwarded to said Treasurer, so as to be received by him on or before the 25th day of December next.

Albany, November 12, 1834. By order.
GIDEON HAWLEY,
Treasurer of the Utica and Schenectady
nov17d&Ctdec20 Railroad Company.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13-1y

MECHANICS MAGAZINE.

THE NUMBER FOR OCTOBER 31, will be ready for delivery to Subscribers on Monday next. It contains numerous articles, and a concise account of the FAIR of the AMERICAN INSTITUTE held at NIBLOS' GARDENS, illustrated with numerous engravings.

☞ MECHANICS' and OTHERS who feel interested in endeavoring to abolish the abominable "STATE PRISON MONOPOLY" are requested to forward to the Editor such facts as come within their knowledge, and they will be published if authenticated.

The Mechanics' Magazine and Register of Inventions and Improvements is published by the Proprietors, D. K. MINOR & J. E. CHALLIS, at No. 35 Wall-street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75 —or at $3 per annum, *in advance.*—JOHN KNIGHT, (formerly proprietor of the London Mechanics' Magazine,) Editor.

AGENTS FOR NEW-PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.00—Semi-Weekly, at $4.00 in advance.

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The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.
J31 6t

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf R M & F

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 232 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

J23 1am H. BURDEN.

STEPHENSON,

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☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.
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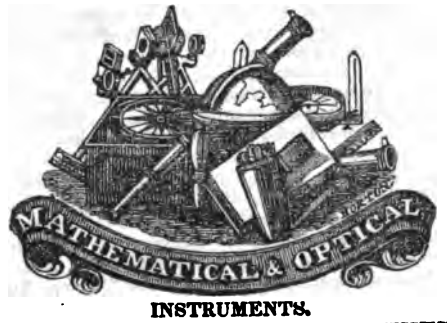

INSTRUMENTS.

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☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch,
200 do. 1½ do. ¼ do.
40 do. 1¼ do. ¼ do.
800 do. 2 do. ¼ do.
800 do. 2½ do. ¼ do.
soon expected.

Flat Bars in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

3250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2½, 2⅝, 2¾, 3, 3⅛, 3¼, and 3½ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1832.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

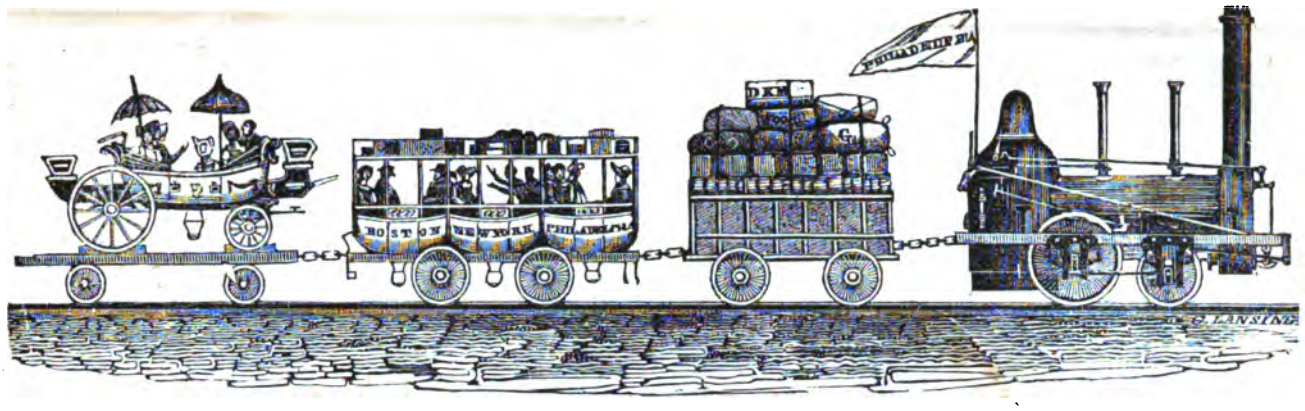
Germantown, February, 1832.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. Germant. and Norrist. Railroad,

m1 1y



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, NOVEMBER 29, 1834. [VOLUME III.—No. 47.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 29, 1834.

We alluded some days ago to the project referred to in the anexed extract which supplies some additional particulars.

Junction of the Mediteranian and Red Seas.—*Egypt, Sept.* 10 1834.—All the generations which have succeeded each other in Egypt have imagined that immense advantages would result from the junction between the Mediterranean and the Red Seas; and long ago commercial Europe has been aware of the immense profits that might be derived from such an opening. This great work, to the execution of which the European powers ought to have jointly contributed many years ago, is at length about to be effected. It is already commenced, thanks to Mehamit Ali. There is not however, to be a canal.—The isthmus has again been explored by scientific men, and they are apprehensive of its inundation; therefore, a railroad is to be made, which is to take its rise at Choubrah, pass 20 min. distance of Cairo, and running along the flanks of Motakam, will finish at Suez. The merchant vessels will be unladen at Alexandria, and the goods will be conveyed by steam boats by the canal of Mack-Modie, as far as Alfe, thence to Choubrah upon the Nile. There they will be placed in waggons, and forwarded to Suez, for embarkation, upon steam vessels, which are already employed in conveying goods from that place to Bombay, Mr. T. Galloway, the engineer, embarked yesterday for Malta, in the Phenix brig of war, which his Highness has placed at his disposal. He will proceed from Malta to England without delay. The principal object of his mission is relative to a treaty with the East India Company on the subject of the transit duties to be levied on merchandise. This distinguished officer, who is son to one of the first engineers in England, will, we hope, be back again in less than a year. He will bring with him men and materials to complete this great work.—The house of Galloway, Thibuldi, and Co., of Alexandria, has received a commission from the Viceroy for this great undertaking, which will require a capital of 15 millions. France is too much interested, on account of her growing commerce with Inda, and her direct commercial intercourse with Egypt, in the success of this grand universal work, not to hasten to do all in her power to aid it with her credit.—[Courier de Lyon.]

The Village Record states that the citizens of that neighborhood are making great exertions with reference to a Railroad from Port Deposite to Philadelphia, by extending the West Chester Railroad to the former place.—[Pennsylvania Inquirer.]

NEW-YORK AND ERIE RAIL ROAD.

The friends of this truly splendid work will soon be gratified with the report of Judge Wright, which will, probably, be presented to the Legislature at an early period of its session. The report will, as we understand, show the route altogether more feasible than was anticipated. It is, therefore, now only necessary for the Legislature to act promptly and liberally towards the Southern section, as it has long since done to the Northern, to ensure a speedy completion of the work; and that they will pursue such a course, we can hardly for a moment doubt. They must, at all events, feel the necessity of action—prompt and decided action—when they see and realize the untiring perseverance of our natural rival, Pennsylvania, to divert from us, and secure for herself, the rich and increasing trade of the Great West.

The following extracts, from a Report to the President and Directors of the Sandy and Beaver Canal Company, will give some idea of their determination to be *successful* rivals.

[From the Commercial Philadelphia Herald, of Nov. 12.]

This work, designed as the connecting link between our State improvements and the Ohio Canal, thereby securing to us the vast trade of Ohio, Indiana, Kentucky, &c. commences near the town of Bolivar, on the Ohio canal, and debouches into the Ohio River, about 30 miles below Pittsburgh. It is in extent about 76 miles, and is estimated to cost about $1,250,000.

In the year 1828 the route was surveyed under the direction of Major Douglass, and a favorable report obtained; since then, sectional and conflicting interests have created doubts as to the adequacy of the supply of water, and the scheme so fraught with interest to our State improvements, and so closely allied to the growth and prosperity of our city, has been suffered to lie dormant. In order, however, to set all doubts at rest on the subject, the Directors of the Company have thought proper to have a re-survey made. For this purpose the services of two engineers from this State (E. H. Gill and H. Hage) were obtained during the past summer, who give it as their opinion that the supply of water is fully ample for all the wants of an extensive trade. I am informed the line is to be placed under contract immediately, so that the period is not now far distant when the immense products of the far West shall find our market.

The charter of the company holds out the strongest inducements to capitalists; from it we extract the following section—

"That when the Canal shall have been completed 20 miles from the Ohio Canal, said company shall be entitled to collect and receive the tolls accruing on the Ohio Canal, on all freight and passengers that may be transported thereon, and which have been transported not less than twenty miles upon said Sandy and Beaver Canal, to the Ohio Canal, and to receive the toll on all freight and passengers that may be transported thereon, and discharged and landed in said Sandy and Beaver Canal, at any point not less than 20 miles from the Ohio Canal, for the term of seven years from and after the completion of the twenty miles of Canal as aforesaid."

REPORT.

The summit of the Canal drains eighty square miles of country, and is fourteen miles in extent, ten miles of which are located over ground exceedingly favorable for the retension of water—being a tough clay, mixed with a small portion of gravel. The top water line of the Canal is depressed to a plane, lower than the surface of the adjoining country, and as the cutting is deep, and the ground gradually rises as it recedes from the line, no allowance can be requisite for losses by leakage. This portion of the route is frequently intercepted by small, but durable streams, and the soil being extremely springy, there is every reason to believe that it will afford an ample supply for all losses that can possibly be sustained by evaporation. The remaining four miles of this, and three on the adjoining levels, dependent on the summit for their supply, are of a character somewhat different, and will require some allowance for leakage and evaporation. * * *

After enumerating the different streams from which water is to be drawn, it says—

This amount being inadequate to accommodate the trade that may be anticipated, it becomes necessary to resort to reservoirs, which, during the dry season, will supply the deficiency. Numerous and eligible sites, for this purpose, present themselves; the most favorable of which are on the West Fork of Little Beaver Creek, and Cold Run. The first of these will flood 300 acres, and contain 105,937,920 cubic feet of water, having an average depth of 8.10 feet above the highest plane of the summit level. The other is intended as an auxiliary, to connect with the former, by means of a short feeder; will inundate about 96 acres, and contain 33,711,680 cubic feet of water—having an available average depth of 806 cubic feet, amounting in all to 139,649,600 cubic feet. If from this amount we deduct twelve inches in depth for evaporation, &c., we shall have left for navigation 134,943,744 cubic feet; being sufficient to pass 102,83 boats per day—this, added to the 1.745 boats per day, in the foregoing statement, gives a supply sufficient to accommodate over 120 boats per day, during the dry season. The estimated cost of

constructing these reservoirs, and the Mahoning feeders, is as follows:

WEST-FORK RESERVOIR.

68,000 cubic yards embankment, at 30 cents,		$13,600
500 linear feet of pipe at 5,40	. . . .	2,700
672 perches wall " 2,00	. . . .	1,344
200 " " " 3,00	. . . .	600
Sluice gates, &c. &c.	. . . . .	1,000
		$10,244

COLD RUN RESERVOIR.

12,684 cubic yards feeder excavation, at 8 cts.		1,014 72
47,000 cubic yards embankment, at 16	.	7,520
214 linear feet pipe at 5,40	. . . . .	1,155 60
400 perches wall, at 2,00	. . . . .	800
200 " " " 3,00	. . . . .	600
Sluice gates, &c.	. . . . .	500
Waste weir in feeder	. . . . .	150
		$11,740 32

MAHONING FEEDER TO WEST FORK.

24,700 cubic yards excavation, at 12 cents		2,964
9,000 cubic yards embankment, 15	. .	1,350
Waste weir	. . . . .	200
		$4,514

MAHONING FEEDER TO DAVIS' BRANCH.

85,700 cubic yards excavation, at 12 cents		10,284
27,000 cubic yards embankment, 15	. .	4,050
Bridge at deep cut	. . . . .	150
		$14,484
		49,982 32
Add 10 per cent. for contingencies	. . .	4,998 23
Total estimated cost	. . . . .	$54,980 55

THE EASTERN DIVISION

of the canal descends rapidly from the summit level, for about one mile and a half, whence it enters the valley of the Middle Fork of Little Beaver Creek. This stream affords, at all seasons, an ample supply of water to meet the demands of leakage, evaporation, and lockage, and as it approaches the Ohio River the flow is greatly augmented. The valley of the stream offers eligible sites for the construction of dams, and, from its general formation, is well adapted to the purpose of slack-water navigation. Should the canal be extended up the Ohio River, it will be fully equal to its wants.

ON THE WESTERN DIVISION

of the line, a portion of the levels near the summit, or Middle Division, will require to be fed from the upper level. Loss by leakage and evaporation on this portion has been accounted for in our foregoing calculations.

The valley of Sandy Creek, through which this division is located, is peculiarly favorable for the construction of a canal. From the numerous streams that intersect the creek, in its meanderings, there can be no doubt as to the abundance of the supply of water for this division.

The country through which the whole line passes, offers, in general, facilities for the construction of the work in question, that are not usually met with. Timber and stone, of a superior quality, are found in abundance. Hydraulic lime is frequently met with; and we have no hesitation in saying, that the improvement can be constructed at a moderate cost, compared with works of a similar extent.

All which is respectfully submitted.

E. H. GILL, HOTHER HAGE. } Engineers.

New Lisbon, O., Oct. 13, 1834.

***Report on the Survey of a Canal Route to connect the Waters of Lake Michigan and the Illinois River*, 1831.**

WASHINGTON, May 20, 1832.

SIR,—In obedience to the orders of the Chief Engineer, dated the 27th of April, 1831, I proceeded to Cook county, State of Illinois, to complete a survey, (commenced by Messrs. F. Harrison and W. B. Guyon, assistant civil engineers in the service of the United States, in the summer of 1830,) the object of which was the selection of a route for a canal to unite Lake Michigan with the Illinois river. The results of the survey, exhibited in nine sheets of maps, and the same number of sheets of profiles, with a memoir explanatory of the same, I now have the honor to lay before you.

The route examined commences on Chicago creek, which empties into Lake Michigan about six miles above its mouth; thence in a westerly direction across the low ridge dividing the head waters of the above mentioned creek from Des Plaines river, till it strikes into the valley of the Des Plaines, near its junction with Mud Lake, down this valley on the left bank of the river for twenty-six miles, when it crosses to the right bank, along which it continues to the junction of the Kankakee river, the united streams from the Illinois. The valley of the Des Plaines is, on an average, about two miles wide, bounded by bluffs from 20 to 60 feet high; the soil is generally poor, the rock, (sandstone,) in a great portion being very near the surface, and in the remainder gravelly, with a thin covering of soil; timber is scarce, and of an inferior quality. The river is a succession of rapids from its head to the mouth of the De Page; then to the Kankakee, the current is very sluggish.

From the junction of the Des Plaines and Kankakee, the line runs on the right bank of the Illinois, generally in an open prairie, to the foot of the rapids, crossing no stream of any consequence except the Fox.

The valley varies in breadth from one to three miles; it is bounded by high and steep bluffs; the soil is generally of good quality, and timber is plenty, especially on the left bank. The rapids commence about 27 miles below the mouth of the Kankakee, and continue with little interruption for 15 miles. During high water, steamboats drawing not more than four feet can ascend to the mouth of the Fox, 8 miles above the foot of the rapids.

When the Indian trade was extensively carried on upon the Illinois and its tributaries, boats ascended the Illinois and Des Plaines to Mud Lake, and then dragged across to Chicago creek, and descended to Lake Michigan. In the spring, when the water was high, no portage was necessary, and boats carrying as much as six tons, passed from Mud Lake to the creek without difficulty.

Map No. 1 exhibits the survey of Chicago creek, together with eight miles of the canal route; the profile of the latter is on sheet No. 1.

The survey of the creek commences at its mouth, which is obstructed by a bar. At the time it was sounded, during the summer of 1831, there was two feet water, but it is constantly altering, and sometimes completely closed. From the bar, the water of the lake gradually deepens, and 445 yards from its mouth there is 18 feet water.

The creek, from its mouth to Fort Dearborn, a distance of 467 yards, runs parallel to the lake, (course nearly north,) from which it is separated by a narrow sand bank; its average width 100 yards; the depth varies from 6 to 15 feet. From the fort of the village of Chicago, the course is west, distance 1150 yards, average width 70 yards, and from 15 to 26 feet deep; at this point the stream forks. From the village the main branch has a course east of south for 3200 yards, average width 60 yards, depth 17 feet; thence to the point where the line of levels commence, the course is south of west, distance 5230 yards, average width 44 yards, depth varying from 26 to 10 feet. The creek heads about 2500 yards from the above mentioned point, in low wet ground, which extends in a westerly direction for about 4 miles to Mud Lake, which communicates with the river Des Plaines.

Mr. Guyon commenced his line of levels at Chicago creek, at the mouth of a broad slough, marked on the map stake, No. 1, 2·55 feet above the surface of the water in the creek, which is the same as the surface of the lake. The line runs from 5⅞ miles over an open prairie, when it strikes upon the shore of Mud Lake, to which it is parallel for 2⅜ miles, when it comes upon the left bank of the Des Plaines, along which it continues for ¾ of a mile; the ground to the south of the line, for the last two miles, is high and wooded.

The total distance is 8⅛ miles; the highest point above the lake is 100 feet.

Map No. 2.—From the 8⅛ miles to the 18⅛ miles of the main line, and from B M 3 to the termination of the feeder line from the Calamic river. The profile of the main line on sheets 1 and 2, that of feeder on sheet 3.

From the 8⅛ mile to the 135th picket, six miles, the line is on a prairie, and nearly parallel to the river, when it enters a thick wood, in which it continues to B M 6, a distance of 4 miles: for the last two miles at the foot of a high ridge, which commences opposite the 12th mile, it is indented with numerous ravines, and runs parallel to the river for 6 miles, when it turns abruptly to the east, forming the north bank of the Ausoganashkee swamp; from B M 6 an offset was made to B M 8 of feeder line: the level of 10 feet above the lake can be kept up.

Map No. 3.—From the Calamic river to B M 3; this, with the portion on map, No. 2, comprises the feeder line, distance 18⅛ miles: the profile is shown on sheet 3.

The feeder line commences at the junction of the Calamic river with Stony creek, marked on the map B M No. 1, running along the low grounds of Stony creek, Grassy lake, and the Ausoganashkee swamp: from picket 120 to 181, it was run on the slope of the bluff for convenience; a lower level can be had, as will be seen on reference to the offsets on profile 3.

From picket 20 an offset was run to a point on the Calamic, marked on the map A; its surface here is 0·69 feet higher than at B M 1, and 2·81 feet above Lake Michigan. At this point the river was gauged, and, according to Mr. Guyon's calculation, it discharges 286·95 cubic feet of water per second: from the 183d picket an offset was made to the Des Plaines river: its surface is 5·32 feet above the Calamic, and 7·20 feet above Lake Michigan.

On the 21st of October, 1829, Dr. Howard, United States civil engineer, gauged the Des Plaines at Lawton's trading house, and made the discharge 26·80 cubic feet per second. On the 8th of Aug. 1831, Messrs. Harrison and Guyon gauged it at the same place, and made the discharge 15·14 cubic feet per second. Mr. Lawton stated to them that he had seen the river lower.

Map No. 4.—From the 18⅛ mile to B M 10; the profile on sheet 2.

From picket 185 to B M 7, the line crosses the Ausoganashkee swamp, which is here 1443½ yards wide. The ground for the first 186 yards is dry and firm, as the swamp expands considerably at its mouth; by crossing further up, the distance across it might be greatly diminished. From B M 7 to stake 16, the line runs on a prairie, with the exception of the first quarter of a mile, which is on wet ground, covered with wood. Here the bluff forms the river bank, and the line is on the slope for seven eighths of a mile, when the bluff recedes from the river, and the line comes on a level open ground, which continues to the 27½ mile, crossing two sloughs, through which the water flowing from the bluff is discharged into the river: from the 27½ mile the line is on the slope of a mound for 770 yards; thence, on low marshy ground, to stake 30, crossing three streams with rocky bottoms. From stake 30 to 31 the ground is open and dry: the line might have been nearly straight from stake 24 to 30: from stake 31 to B M 10 the line is on a gentle slope; near the B M it crosses a ravine 35 feet wide and 5 feet deep. This is the termination of Mr. Guyon's survey, being 29 miles and 423⅔ yards from the commencement at Chicago creek.

The balance of the route was surveyed and levelled by myself, assisted by Mr. Chauncey Barnard, jr.; the distances are computed from B M 10, map No. 4: from B M 10 to B M 22, 14⅛ miles. The first 12 miles of the profile on sheet 4, the balance on sheet 5.

From B M 10 to B M E the line runs on a descending plain, covered with short grass; the soil is generally wet, and rock is found

from 6 to 18 inches from the surface; the bluff gradually recedes from the river, leaving a wide bottom. It is rocky and thinly wooded. At B M E the line crosses the Des Plaines; the banks are rocky, and the streams divided in two channels by a rocky island; the first is 19½ yards wide, and 1 foot 6 inches deep; the island 24⅔ yards wide, its highest point 9 feet above the surface of the river; the second channel is 22⅓ yards wide, and 2 feet deep; the bed of the river is rock, and the current rapid; the surface 63·05 feet below Lake Michigan. The bluff on the west side of the river forms the bank, and the line runs on the slope for 1⅔ miles; it is rocky, with a thin covering of gravel; it then crosses a small stream, through which the water flowing from the upper prairie is discharged. From this point the bluff gradually recedes from the river, leaving a wide bottom, intersected by numerous low gravel ridges, upon which the line runs to the 8⅔ miles to the north of the line, and opposite to the 8th mile is an isolated hill 500 yards long and 40 feet high, called Mount Joliet: from the 8¾ mile, the line runs on the slope of a gravel ridge for 660 yards, when it crosses low ground three-eighths of a mile wide, to the foot of a high ridge that extends to the river, and continues along its base to B M 17, on the north bank of the Joliet river, which is 25⅓ yards wide, and 1 foot 2 inches deep, with a gravelly bottom, and no perceptible current: the surface is 77.47 feet below Lake Michigan. From B M 18 (south bank of the Joliet) to the 11⅓ mile, the line is on a sloping ground, crossing a wide ravine, which is said to communicate with the river De Page; thence, to the 13⅔ mile on the slope of the river bank, a narrow wet bottom intervenes between the bank and the river: it then comes on a level open ground, which continues to B M 22, crossing two small streams.

Map No. 6.—From B M 22 to the 27⅞ mile, 13⅞ miles, and feeder line, to the De Page, 1⅔ miles. The profile of the first 9⅞ miles on sheet 5, the balance on sheet 6; profiles of feeder line on sheet 9.

From B M 22, the line for 1 mile is on open, level ground; thence to B M 24, on the slope of the bluff, which is thinly wooded; thence to B M 25, on a gravelly ridge: at B M 24 the bluff turns to the north, leaving a wide bottom through which the river De Page runs. At the junction of this stream with the Des Plaines, there is an Indian village.

From B M 25 a line was run to ascertain if the De Page could be used as a feeder. The rise in the 1⅔ miles is 11.3 feet; (at B M A,) the stream was gauged on the 12th July, 1831; its discharge was 62.24 cubic feet per second; it must be remarked that the summer of 1831 was unusually wet. On the 23d July, 1830, it was gauged at Walkin's, 3 miles above B M A, by Messrs. Harrison and Guyon; the result was 27.75 cubic feet per second. The season, however, was uncommonly dry.

At B M 25, the main line crosses the De Page: it is 85⅓ yards wide, and 1.1 foot deep, with a rocky bottom and a gentle current; its surface 79.32 feet below Lake Michigan. It then crosses a bottom 183 yards wide, that is inundated during high water, then, to the 18th mile, on dry, level, wooded ground, along the foot of the bluff, which here forms the river bank; thence to the 19th mile, on the slope of the bluff, which is broken, and covered with heavy timber, principally oak, ash, and walnut. Here the river turns nearly at a right angle, the bluff keeping parallel to it; the line continues on the slope of the bluff to B M 31, where the timber ends. Opposite this the Des Plaines unites with the Kankakee, and the Illinois is formed. From B M 31 to 200 yards below B M 32, the line runs on a steep, broken clay bank, the river running at the foot of it; then for half a mile on the slope of a gravel ridge, when it descends, crossing a small gully into a prairie, on which it continues to B M 33. From B M 33 the bluff recedes from the river, and gradually descends to the general level of the country, as it approaches the Au Sable river.

From B M 33 to the Au Sable, the line is on an undulating prairie; it then crosses the river, (the Au Sable,) to B M 34. The stream is 19⅓ yards wide, 2.10 feet deep, rocky bottom, and very little current; the surface is 83.46 feet below Lake Michigan. Its banks, below this point, are thickly wooded. From B M 34 to the 27⅛ mile, the line passed over a prairie, the surface very irregular, caused by numerous gravel ridges.

Map No. 7.—From the 27⅞ mile to the 41¼ mile: 13⅜ miles profile of the first 8⅓ mile on sheet 6, the balance on sheet 7.

From the 27⅜ mile to B M 35, the line runs at the foot of a ridge, the ground gradually descending to the river; thence to B M 36, on the slope of the same ridge, when it turns to the north, in order to avoid a low bottom made by Nettle creek and Little Maison river, which unite about 100 yards below the bench mark. Between B M 36 and 38, both streams are crossed; the first is 13 feet wide and 1 foot deep, passing through a deep ravine 150 yards wide; the second is 23 feet wide, and 2½ feet deep; the ravine through which it runs is 245 yards wide. From B M 38 to 39 it runs on the slope of a gravel ridge, between which and the river a low bottom intervenes, which is overflowed during the spring freshets from B M 39 to the 33⅞ mile on the slope of the river bank; then to the 36th mile on a prairie intersected with gravel ridges. It then crosses a marsh three-quarters of a mile wide, to a dry gravel ridge, thinly wooded, on the slope which it continues to the 37⅜ mile; thence, on a wet bottom, to the 41¼ mile, crossing two streams; on the left of the line is a high bluff, broken by numerous wide and deep ravines. It is thinly wooded, and chiefly white oaks; the soil of the bottom is alluvial, and covered with very high rank grass.

Map No. 8.—From the 41¼ to the 52½ miles, 11¼ miles. The profile of the first 6¼ miles on sheet 7, the balance on sheet 8.

From the 41¼ mile to B M 44, the line continues on the bottom, (the surface irregular, caused by ridges putting out from the bluff, and extending to the river—between these ridges the ground is marshy,) crossing two streams, the first ten feet wide and 6 inches deep, the second 38 feet wide and 3 feet deep, running in a ravine 149⅓ yards wide: the surface of the water is 102.20 feet below Lake Michigan; this gives the surface of the Illinois, it being so high as to back up the water in the creek. Bituminous coal, of an excellent quality, is found in the banks of the stream. From B M 44 to 48 the line runs on open ground, crossing three small streams; thence to the 50th mile, on a gentle slope: B M 48 is on the bank of a brook 20 feet wide; thence, on a flat prairie, to the 52½ mile, crossing two branches of the Chicago road, the first leading to a ford, and the second to the ferry of the Illinois.

Opposite the 49th mile, the bluff begins to recede from the river in a northwest direction. The grand rapids of the Illinois commence opposite the 46½ mile; and from this point to the foot of the rapids, a distance of about 16 miles, during the low stages of water, the river is only navigable for small boats.

Map No. 9.—From the 52½ mile to the termination of the survey, 10 miles and 579⅓ yards; feeder line up the Fox river, from the point marked A on the map, to the head of the principal rapid, 4 miles and 649 yards. Profile of main line on sheet 8, profile of feeder on sheet 9.

From the 52½ to the 53⅛ mile, the line runs on a dry level prairie, when it commences to descend to the Fox river, the east bank of which is a gradual slope, the west rocky and nearly perpendicular. Where the line crosses the river, it is 125½ yards wide, its surface 127.11 feet below Lake Michigan; in ordinary stages of the water it is fordable, but, owing to heavy rains, it was, at this time, 6 or 8 feet above low water mark.

A line was run on the west bank of the Fox to the head of the principal rapid, a distance of 4 miles 649 yards; its surface at that point was 96.52 feet below the lake, making a rise of 30.59 feet. The stream was so much flushed that it was useless to gauge it, but I was informed it discharged a large quantity of water at all seasons.

From the 53¾ mile to the 54⅞ mile, the line is on a dry prairie, crossing a ravine 38⅓ yards wide; its banks are rocky; a great deal of water passes through it, being the drain of a large prairie; from the 54⅞ to the 55th mile, the rock (soft sandstone) is very near the surface, and, in some places, is visible. Thence, over a sandy ridge, through a gap of a rocky ridge, to the 57th mile; then to B M 51. on open, level ground, crossing a stream, which is the outlet of a large swamp, at the foot of the bluff. From B M 51 to the 58¾ mile, the line is on marshy ground; and midway between the bluff and Buffalo rock, an isolated rocky hill about one mile long, and a quarter of a mile wide in its broadest part; its south side forms the bank of the Illinois; thence, on a dry gravel ridge, to the 60⅛ mile, when it crosses a slough 266⅔ yards wide, through which, during the spring freshets, the water from the river passes into the marsh at the foot of the bluff. From this point to the 62d mile, the line runs on a dry gravelly ridge, when it descends on a botton, which is overflowed during extraordinary freshets, and continues on it for three-quarters of a mile, when it strikes upon the Illinois river.

This point is at the foot of all the rapids, and boats that can pass over the bars at Beard's ferry, Fort Clark, and the Little Vermillion river, can ascend to this point. The surface of the water is 139.64 feet below Lake Michigan; but from what I learned from persons living in the neighborhood, the river was from 12 to 15 feet above low water wark. The total length of the line, from its commencement on Chicago creek to this point, is 92 miles and 123⅓ yards.

I was desirous of running a line from the 60⅛ mile to the mouth of the Little Vermillion river, three miles below the termination of my line, along the foot of the bluff, but owing to the heavy rains, it was impracticable to effect it, the marshes along the bluff being impassable without swimming. The canal commissioners of the State of Illinois designated the mouth of the Little Vermillion as the termination of the canal. I have the honor to be, very respectfully, your obedient servant,

H. Belin, Assi't Civil Engineer.

To Lieut. Col. J. J. Abert,
Topographical Bureau, Washington, D. C.

Fifth Annual Report of the Chief Engineer of the Baltimore and Ohio Railroad.

Engineers' Office, Baltimore and Ohio Railroad,
Baltimore, Oct. 1, 1834.

To Philip E. Thomas, President &c.

Pursuant to the regulations prescribed, I have now the honor to present the Fifth Annual Report of this department.

When the last annual report was made, the Surveying party were engaged in the definitive location and staking out for contract of the second and third divisions of the adopted route of the lateral railroad to the City of Washington; the surveying of the first and fourth divisions having been previously completed. This service was effected in October last, so that at the close of that month the entire line, from its intersection with the Baltimore and Ohio Railroad, to the northeastern boundary line of the City of Washington, being about 29 miles, was prepared for contract. During the succeeding month the surveying party completed the staking out of the lateral boundaries of cut and fill, as well as of those of the lands requisite for the roadway. That part of the line of this road situated within the limits of the City of Washington, and called the fifth, or city, division, has not yet been definitively located; the route has, however, been traced

and estimated as far as New-Jersey Avenue, at the intersection of H street, distant from the aforesaid limits a fraction more than one mile. The position of the line within the territorial bounds of Washington, so as best to promote the accommodation of the public, will soon claim attention—to effect this object the concurrence of the municipal authorities of that city will be requisite.

In the month of December last a survey was directed by the board, and executed by this department, in order to ascertain if several miles of the line in the vicinity of Bladensburgh could be changed and laid upon other ground without material injury to the road, so as to meet the views contained in a petition preferred upon the subject by an extensive proprietor, through whose lands the route had been laid and staked out for contract. Upon this survey, my report, with the relative calculations and drawings, was made on the 28th of that month, and the board made no change in the line as it had previously been run.

In the inclement weather of January, the route of the Baltimore and Ohio Railroad between the upper Point of Rocks and Miller's Narrows, that is, 8¼ continuous miles of the distance between the Point of Rocks and Harper's Ferry, was, under instructions received from thee, surveyed by this department, for the purpose of ascertaining the relative merits of a line proposed by the Chesapeake and Ohio Canal Company, as a substitute for the line run by Caspar W. Wever and approved by me, as stated in my last annual report. A report, with the requisite calculations and drawings, being made, the line, as proposed by the Canal Company, was, with certain modifications suggested on the part of the Baltimore and Ohio Railroad Company, finally assented to and adopted by both companies as the route upon which the railroad should be constructed. It was accordingly staked out for contract, in the month of April, and the boundary stakes of cut and fill, as well as those of the lands for condemnation and occupancy by the road, were planted.

During the month of August last, a survey and report was made of the graded surface of $4\frac{1}{10}$ miles of the Baltimore and Ohio Railroad, including the narrow passes along the Potomac between the Point of Rocks and Harper's Ferry, which had been undertaken by the Chesapeake and Ohio Canal Company, and the work was found to be then very nearly completed.

In addition to the rough drafts executed during the progress of the surveys, the following described maps and profiles have been made during the year, and, as marked, remain on file in this office, viz.:

Five maps and profiles, together representing the line of location of the lateral railroad to Washington, as staked out for contract: these maps are designated by the initial letters, Lat. R. Rd. to Wn. and are numbered from 1 to 5 inclusive. Their horizontal scale is 13.2 inches to the mile, and the vertical scale of the profiles an inch to 50 feet.

The maps comprising the location of the 6th division of the Baltimore and Ohio Railroad, from the Point of Rocks to Harper's Ferry, on a scale of 26.4 inches to the mile horizontal, and one inch to 40 feet vertical. These maps exhibit the relative positions of the railroad and canal, and are each marked with the letters and words, B. & O. R. Rd. on Potomac, and numbered from 2 to 10 inclusive. In addition to the lettering and numbering, there is also a title placed upon the first map of each set.

A map and profile of the sixth division of the Baltimore and Ohio Railroad, extending from the Point of Rocks to Harper's Ferry bridge, has been engraved on a scale of 2 inches to the mile horizontal, and 1 inch to 100 feet vertical, and accompanies this report.

A sheet of drawings descriptive of the Rolled Malleable Iron Rail of 40 lbs. per yard, adopted for the Washington Railway, is likewise annexed to this report.

The field and office operations within the year having been adverted to, it may be added, that in their performance, generally, I have been essentially and efficiently aided by Benjamin H. Latrobe, Principal Assistant Engineer, who was charged with the immediate command of the parties on duty, and by William P. Swann, Henry R. Hazlehurst, and James Murry, Assistant Engineers of much merit.

The process of construction as regards the graduation and masonry was commenced upon the 1st division of the Washington Railroad about the time of submitting the last annual report, as will be seen on a reference to it; and soon afterwards, the lettings for these operations were extended as far as to the line of the District of Columbia, comprising, inclusive of three principal cuts, the conducting of which is under the superintendency of agents approved by the board, a length of line equal to about 26 miles. Upon these 26 miles all the masonry, excepting "the Thomas Viaduct" at the Patapsco, has been completed. The graduation upon the same has likewise been finished, except only at the three cuts alluded to, viz.: at Merrill's ridge, Patuxent ridge, and Snowden's ridge. It is confidently expected that the graduation at these ridges will be completed by the first of December next, and that the arches of the viaduct over the Patapsco will be closed about the same time. It is believed that seldom or never has so great a quantity of work been performed in so short a time, upon any line of internal improvement.

Very soon after, the 8¼ miles of the Baltimore and Ohio Railroad, between the upper Point of Rocks and Miller's Narrows, were prepared for contract, the graduation and masonry were commenced, and the work has progressed so rapidly that it is already completed.

Materials have likewise been procured, and are in the course of delivery, for laying down the first track of railway upon the Washington Railroad, and the first track upon the sixth division of the Baltimore and Ohio Railroad, and contracts have been made for the construction of these respective tracks upon the plans matured by this department; and it may be here stated that the breadth of track between the iron rails of the Washington road is 4 feet 8½ inches, (allowing a flange play of one inch,) and that the distance of the two tracks apart is to be six feet, measured from centre to centre of the rails. It is believed that a single track will be finished to Harper's Ferry Bridge during the present season; and that such progress in the same time will be made in the construction of the railway upon the Washington lateral road, that a track will be opened and travelled from Baltimore to the line of the District of Columbia by the first of July next.

For a detailed statement of the operations connected with the construction of the graduation, masonry, and railway of both roads, I refer to the report of Caspar W. Wever, superintendent of construction, which will contain all the information under this head that could be desired.

Before dismissing the subject of construction, I would, however, respectfully suggest that unless the 3 miles of the line in the District of Columbia, and the additional part within the territorial limits of Washington of one mile or more, shall be soon entered upon with a view to the extension of the road to, and into, the city, much disadvantage to the public will be experienced, whilst the revenue of the 26 miles constructed to the District line must be rendered less productive.

The construction and improvement of railway machinery, both as regards cars and locomotive engines, have steadily and successfully advanced, under the particular direction of George Gillingham, superintendent of machinery, and of the general superintendency of this department, aided by Ross Winans, assistant engineer of machinery, who possesses mechanical genius of a high order, as also does the contractor and manager in the company's machine shop, Phineas Davis. The annual report of the superintendent of machinery will detail the operations of his department with minuteness, for which reason, my observations touching this branch of the service may be the more general, and will mostly relate to the advances in improvement.

It was stated in my last annual report, that a second locomotive engine had, in the year preceding, been built by Phineas Davis, and placed upon the road; the "Atlantic" engine, which had previously been put upon the road, having been the first one of any efficiency, produced by the call of the board, for locomotive steam engines of American manufacture, to burn Anthracite coal. This second engine was described in that report, so far as to indicate the points of difference in construction between it and the "Atlantic" engine, previously built. It was stated that the new engine had cranks upon the axles of the road wheels instead of a spur and pinion, as in the "Atlantic," and that upon the failing of the crank axle it was resolved to gear with the spur and pinion, placing the pinion upon a shaft distinct from the axle of the road wheels. It was likewise mentioned that the separate shaft for the pinion was adopted to obviate the strains upon the gear observed to take place in the Atlantic engine, from the unavoidable jolts of the road wheels upon the axle of which the pinion was placed. This action had been such as to break the cogs of the spur and pinion wheels. The separate shafts being geared to the axle of the road wheels by a connecting rod, would not be subject to the jolting action, but would revolve smoothly upon its bearings in the side frame, resting upon the springs. On repairing this engine, (which had been called the Indian Chief,) it was accordingly so modified, and again put in motion, with its appellation changed to that of "the Traveller." The Traveller came into action immediately after the compilation of my last annual report. Its movements were important, as testing the virtue of the modified gearing, and indicating the form of construction to be given to the new engines. Upon sufficient trial, it was satisfactorily shown that the theory of a separate shaft was fully sustained in practice, and therefore this arrangement obtains in all the engines subsequently built, two of which, the "Arabian" and the "Mercury," by Davis & Gartner, have been put in motion recently. No fracture or failure in the spur or pinion has happened since the change to a separate shaft was made, and all the parts of this gearing work and wear smoothly, and apparently as advantageously as if in stationary engines.

Some other modifications have been introduced, such as in the dimensions of the boiler and cylinders, the form and number of tubes in the boiler, the proportion of connecting rods, and other appendages, the position of the springs, and the transmission of the waste steam from the cylinders to the fan, or blowing apparatus, and of the water to the boiler; all of which aimed at an increase of durability and power without increasing the weight of the whole machine beyond that of the "Traveller," or of causing more than two tons weight to bear upon the railway at any one wheel, a limit not observed in the present arrangement of that engine.

A brief description of the three successively built engines, the Atlantic, the Traveller, and the Arabian, will now be given, in order that their distinctive differences may be more apparent.

The Atlantic has an upright tubular boiler, 51 inches in diameter, and 69 inches in height

above the grate: the diameter of the fire place is 46½ inches, and its height 22 inches: the height or length of the tube is 16 inches, having each a diameter at the lower end of 1½ inches; and at the upper end of 1¼ inches; the tubes are of hammered iron, and 282 in number; they terminate at top in a hot air chamber, the upper plane of which is about 3 inches below the level of the surface of the water in the boiler. The diameter of this chamber is 46½ inches, and its height 6 inches. The hot air passes thence upwards to the top of the boiler, through the steam chamber, having a diameter equal to that of the boiler, and a height of 22 inches, by means of a cylindrical passage 13 inches in diameter, communicating directly with the smoke stack or chimney, of equal diameter. The top of the chimney is about 14½ feet above the level of the railway. The two steam cylinders stand upright, close to the boiler, are each 10 inches in diameter, and have a 20 inch stroke of piston. The power is communicated by means of connecting rods and two cranks to a shaft that carries a spur wheel 28 inches in diameter, which wheel drives a pinion 14 inches in diameter, on the axle of the forward road wheels of the engine, and causes these road wheels to advance upon the railway two revolutions for each double stroke (i. e. once up and once down) of the pistons. The diameter of all the road wheels is 35 inches, and the power is geared to one pair only. A fan wheel, propelled by the waste steam from the cylinders, is employed to create a blast to urge the fire and effect a combustion of the Anthracite coal, that being the fuel used.

The *Traveller* engine varies in point of construction from the Atlantic, having the pinion removed from the axle of the road wheels, and placed upon a separate axle or shaft posited about three feet forward from, parallel to, and in the same horizontal plane with, the front axle of the road wheels. The length of this shaft is the same with that of each of the two axles of the four road wheels, and it is furnished with a crank at each extremity, outside of the frame of the engine, as is likewise the two axles of the road wheels, so that by means of horizontal connecting rods, the shaft and the two axles revolve in unison, and thus the adhesion unon the railway of all the four road wheels of the engine will be employed, when required. In case the load is such that the adhesion of one pair of wheels only is sufficient, one of the connections may be dispensed with, and the shaft will then be connected only with the axle of the forward pair of wheels. The power is communicated to the pinion on the shaft in the same manner as in the Atlantic, and as in that engine, each double stroke of the pistons effects two revolutions of the road wheels. The side pieces of the frame of the Traveller are plated with rolled iron; the bearing boxes work in slides; and the springs are placed above the boxes and underneath the side pieces: arrangements that are superior to those of similar parts in the Atlantic engine.

The *Arabian* has a boiler similar to that of the Atlantic or the Traveller, already described, except in the number and dimension of the tubes, their arrangement with that of the upper part of the boiler, and a slight change in the dimensions of the latter. The diameter of the boiler is 52 inches, and the height 64 inches diameter of fire place; 48 inches, and height 22 inches. The number of tubes is 400, with a diameter at the lower end of 1½ inches, and at the upper end of 1 inch; length of tubes 31 inches, six or seven inches of which extend above the level of the water surface in the boiler. A part of the upper head of the boiler, 4 feet in diameter, is depressed 11 inches, at which level it receives the upper ends of the tubes, thus forming, as it were, within the steam chamber, a cylindrical hot air chamber, extending from the tubes to the top of the boiler, of the dimensions just indicated, and communicating directly with the smoke stack, which latter is enlarged near its base, and appropriately attached to the cylindrical sides of the hot air chamber. This attachment is such that the smoke stack can be removed at pleasure, upon which the upper ends of the tubes will be exposed to view, and being thus easily accessible, they can be taken out and replaced with new tubes with the utmost facility, when repairs are required. An important improvement in the boiler, it is believed, has thus been effected in the Arabian engine. The diameter of the steam cylinders is 12 inches, and their depth, or length of stroke, is 22 inches. The power is transmitted through similar gear to a separate shaft, and thence to all the road wheels of the engine, as in the Traveller. In the Traveller, the springs are underneath the side pieces of the frame, but in the Arabian, this fixture is improved, the springs being now placed above the frame, as in the English plan. The valve gear for reversing motion has likewise been advantageously modified in the Arabian, being now such that the effort applied to shift the cam frames from one cam to the other, operates simultaneously and alike upon both ends of the frame, effecting the object with more certainty and despatch. Improvements have, moreover, been made in the fastenings, connections, and rubbing parts of these machines, at once securing to the new engines superior stability and duration.

Improvements of some value have also been matured and adopted, having regard to the economy of steam. In the Arabian, the steam is conveyed to the working cylinders by passing it down inside the boiler, to the parts in contact with the cylinders, whence the steam is conveyed into the cylinders with the least loss from condensation. The waste steam, in its transmission from the cylinders to the fan-wheel, is made to pass in a hollow belt encircling the boiler, in which belt, the water pipes leading from the supply pumps are enclosed, and likewise make an entire circuit of the boiler, by which arrangement a portion of the heat of the waste steam is transferred to the water in the tubes, and with the water, is impelled into the boiler. The fan-wheel, upon the vanes of which the waste steam acts, is so contrived and fixed, that the whole or any part of such steam, at pleasure, can be made to propel the fan, thus enabling the attending engineer to control the blast, and by that means to regulate the heat of the fire, so as to generate the quantity of steam required by the emergency.

Hitherto, the successful combustion of Anthracite coal in locomotive engines has been attained only upon the Baltimore and Ohio Railroad, in Cooper's tubular boiler, assisted by an artificial blast; and such a blast is made with the utmost economy, by means of the fan-wheel driven by the directly applied power of the waste steam, or the steam after it has performed its office as a prime mover within the cylinders. This manner of creating the blast is an invention of Phineas Davis, to whom a patent has issued.

In relation to the adopted improvements in the boiler, it may be stated that the comparatively inaccessible position of the tubes in the Traveller engine would render their repair difficult, and as these repairs must become inevitable, a change in the tubular arrangement, giving more facility of approach, was desirable. The suggestion at first presented went to an elongation of the tubes to the upper head of the boiler: a bold, and perhaps hazardous step, since so considerable a portion of their length would be above the water, and be surrounded only by steam. To attain the object of accessibility, and yet avoid the risk alluded to, determined the depressed position of that portion of the head of the boiler in which the tubes are inserted, and being of less diameter than before, passing through 24 inches of water, having only about 7 inches of their length above the plane of the water, and that enveloped in steam, sudden injury from intense heat is not experienced: much of the heat is parted with below the steam chamber, and within it the ebullition of the water acts as a further protection to the tubes.

Whilst the size of the fireplace and the external dimensions in the boiler in the Arabian, differ immaterially from the corresponding parts of the Atlantic and Traveller engines, there has been a decided improvement in the external appearance generally of the new engines, every part being now more tastefully formed and arranged. For these useful, and at the same time pleasing, yet not costly, embellishments of the engines, as well as of the coaches, we are much indebted to the talents and refined taste of John H. B. Latrobe, Esq.

The quantity of fire surface, or area exposed to radiant heat, in the Arabian, is about 30½ square feet, and the area in the tubes in contact with the heated air that passes through them, is 304½ square feet, amounting, in all, to 335 square feet of fire surface. With a boiler and fireplace so arranged and furnished, the generation of steam is sufficiently rapid and voluminous to supply the cylinders, enlarged as they are, to 12 inches diameter, with a 22 inch stroke, at a pressure of 50 lbs. upon the circular inch, and for any velocity upon the road that will be convenient, as is evident from an experiment, in which this engine conveyed at the rate of $11\frac{19}{100}$ miles per hour, on a level part of the road, a train weighing, including cars, but excluding the weight of the engine and tender, 112 tons 18 cwt. 1 qr. the supply of steam being redundant, and pressure 50 lbs. to the circular inch. With this load, the engine advanced, but at a diminished speed, to the summit of 10 feet high in the deep cut, upon the railway, ascending at the rate of 17 feet per mile; and curved with a radius rather less than 1000 feet.

The entire weight of the Arabian, with its complement of fuel and water in the boiler, is 7½ tons; of which there rests upon the forward pair of wheels 3 tons 17 cwt., and upon the after pair 3 tons 13 cwt. The distribution of the weight is, therefore, judicious, and the engine will be less injurious to the railway than the Traveller, weighing 7 tons 11 cwt. 2 qrs., in which 4 tons 11 cwt. 3 qrs. are placed upon the forward wheels, and 2 tons 19 cwt. 3 qrs., upon the hinder wheels. It will be noticed, that whilst the Arabian is of less weight than the Traveller, by only 1 cwt. 2 qrs., yet no one wheel of the Arabian bears upon the railway with as much weight as a single wheel of the Traveller, by 7 cwt. 1 qr. 14 lbs. This equalization of weight upon all the wheels is a manifest improvement in the Arabian, where the adhesion of the weight of the whole engine can be employed in the traction: and it is believed that more than two tons weight should not be allowed to bear upon the rail through one wheel, however high may be the degree of perfection aimed at in the construction of the wheel or of the railway, whilst if either is less substantial, the weight should, if possible, be less than 2 tons, or not exceeding 1½ tons.

The Arabian is beautiful in appearance, and excellent in performance, having a power of steam and of traction, leaving nothing further on that score to desire. This engine was put upon the road, for the first time, about the 14th of July last, and very soon a crank gave way from a flaw, until then unperceived; on th defect being repaired, the engine was directed to the service of daily leading the Fred train of passenger coaches between and the planes at Parr's Ridge about 41 miles, going a making about 82 mile the Arabian was st the honor to submit engine, dated the present year, in w

engine had then performed upwards of 40 trips to and from plane No. 1, having run about 3500 miles with passenger trains without the loss of a trip, and without any repairs. In the same successful manner, were completed 51 trips, when in returning upon the 52d, and after running 4200 miles without any repair, the engine was thrown from the road upon the fracture of a flange caused by impingement against a stone. The Traveller engine was then placed in the line for a day or two, until the Mercury, an entirely new engine, was placed upon the road, when the latter superseded the former in this service. The Arabian was soon repaired and again placed upon the road.

From what has been related, it will appear that the Company had fully succeeded in procuring the construction, in this country, of locomotive steam engines fitted to use Anthracite coal as the fuel, and capable of plying successfully upon a railway having quickly turning curves, upon radii even so small as 400 feet; that these engines have all the power requisite upon railways, and that they appear to be substantial and durable. No further achievement in this branch might, therefore, seem practicable or even desirable. It is, however, believed, that a conclusion to this effect would be precipitate, if not erroneous. True, we can employ any of the usual kinds of fuel, wood, coal, coke, and do now use Anthracite alone; we generate a superabundance of steam; we have power in abundance, and have speed at command; the machinery is beautiful and works admirably; yet, have we not more steam, more power, a greater weight of engine, than is requisite for the conveyance of passengers? We have. The question, however, is, whether an engine of a weight no more than sufficient in point of *adhesion* for this purpose, and weihging only 6, or at the utmost 6½ tons, can be constructed, having at the same time, sufficient strength and durability of parts, and a capacity to furnish steam enough to maintain a proper rate of speed. To ascertain this point, it is in contemplation to plan an engine, geared as the Arabian is, but with parts diminished in size to the greatest extent consistent with the proper degrees of power. When this plan shall be perfected, with every reasonable prospect of success in the valuable qualities aimed at, a practical trial of it in the construction and use of an engine will be recommended. Meanwhile, as engines of the description recently made, and in progress of construction, appear to be of excellent quality, and, in the transit of commodities, will, from their great power of steam and adhesion, be most economical, no intention is entertained of recommending any relaxation in the business of their fabrication at present. At the same time, seeing a possibility that lighter engines may be made successful in the passenger service, and well knowing that such will be less injurious to the rails, and to the wheels, an anxiety is felt not to lose sight of the project of a more complete adaptation of the weight to the strength of the resisting materials.

Coaches for passengers have claimed the serious attention of the engineers and officers of this Company within the past year: and it has been found, on trial, that a coach upon eight wheels is easier, and every way more comfortable, to the passengers, cheaper in cost of construction and repairs, and less injurious to the railway, in proportion to the number of persons carried, the motion being more smooth and steady than those of four wheels. When eight wheels are employed, each end of the coach is supported by a frame having four wheels, the two pairs of which may be as near together as will permit the flanges of the wheels, two and two, to revolve, without being in contact with each other. In this way each set of four wheels will traverse a curved road easier than when the axles are further apart, as they necessarily must be in a coach with only four wheels. The coach has strong side frames of wood, plated with iron, and rests with bolsters upon the wheel frames, to which it is attached by means of a *rose* or centre bolt, permitting each set of wheels to assume, independent of the other, any direction the road may require. These coaches may have apartments to contain from 8 to 12 persons each, whilst the number of apartments in a coach may be 3, 4, or even 5. Coaches with eight wheels will be safer from accident, it is believed, than with four wheels; in fact, they are much more convenient and appropriate, in all respects, for railway conveyance; and this kind of coach has accordingly been adopted.

Steel springs are still being placed upon the burthen cars as well as upon the coaches, and with evident economy in every respect.

Wheels of cast iron upon the cars of burthen, as well as upon the coaches, have stood the test of experience, and have come up to our most sanguine expectations. This description of road wheels has, in a word, been entirely successful. The method of completing the chilling process by means of the introduction of a malleable iron ring into the casting, mentioned in the last annual report as invented by Phineas Davis, has been successful. At first the ring was found to have been placed too near the face of the wheel, and the consequence was, that the thinness of the chilled metal caused it to give way from the action upon the iron rail. To remedy this defect, the ring was made of rather smaller wire, and, in casting, was removed further from the face of the wheel; this modification proved altogether successful, and the most economical wheel possible for railroads has thus been perfected. The wheels for burthen cars and for coaches are cast in the same chill, and are 30 inches in diameter, with 12 arms. The ring is of round wire half an inch in diameter, and it does not approach nearer to the face of the wheel than half an inch. The wheel of the burthen car weighs 222 lbs., and of the passenger coach 260 lbs. In the cast iron wheel of three feet diameter, for the locomotive engine, the size and position of the malleable ring has not yet been satisfactorily determined. In the wheels of this kind last put in use, and within a few days past, the ring is of less thickness than previously used, being reduced from ⅞ to ¾ of an inch, at the same time that it has been placed further from the flange, and ¼ of an inch further from the face of the wheel, being now ¾ instead of ½ an inch from the exterior of the rim. It was found that with the larger ring lying under the coned part, next to the base of the flange, having the ohilled metal only ½ an inch in thickness, immediately over the ring, the rim cracked, and by degrees gave way, to the great injury of the wheel, and in one instance so weakened it, that, upon striking a stone, the flange gave way. This was the casualty in which the Arabian engine was thrown from the road, as already mentioned. Previous to this occurrence, symptoms of defect in the face of those wheels had been observed, and was attributed to the true cause, being the same as had been effectually remedied in the wheels of the cars and coaches, and engine wheels were immediately cast, containing a ring of smaller diameter, placed further from the face of the wheel and from the flange. It is believed, that this arrangement and change of size of the ring will obviate the recurrence of the defect that had been experienced. Other and further precautions, however, to strengthen and render more durable the engine wheels, have been matured, and will be adopted in all future castings of them, and it is not doubted that the cast iron wheel of not more than 35 inches diameter can be made secure, and safely used upon the engines, as has that description of wheel, 30 inches in diameter, been most successfully upon the cars and coaches. Nor will the duration of the cast wheel be less than was estimated in my report upon the Washington Lateral Railroad. I am happy further to add, in this place, my conviction that the estimates for the construction of that road, and for the cost of the motive power and machinery upon it, will not be transcended.

Patterns for the cast iron fastenings of the rails, and for the turn-outs upon the lateral road, are in progress of completion, under the immediate care of the assistant engineer of machinery, Ross Winans, with whose assistance, these fixtures, and the form of the rail, have been matured. The turn-outs will be such as are best calculated to facilitate the passings of locomotive engines.

As regards the business of transit and of revenue within the year, upon the Baltimore and Ohio Railroad, I refer to the report which will be made by the able and very vigilant superintendent of transportation, William Woodville.

Respectfully submitted,

J. KNIGHT, Chief Engineer.

A Few Words in Behalf of Mathematical Science.

[From the London Mechanics' Magazine.]

MR. EDITOR,—Will you permit a foreigner (a Swiss) to make a few remarks on Mr. Cheverton's article on the value and importance of mathematical science.

In the first place I must state, that had it not been for the false aspersions he has heaped upon some of the most illustrious of my countrymen, and more particularly on that excellent man Euler, I should have left him to enjoy all the honors and benefits that may arise to him from the said article.

In the first observation he makes upon Euler, he says, "the most valuable method of determining the longitude was at last accomplished through practical means, and by practical men. Euler aimed to produce an achromatic lens as well as Dollond, but it was the latter who succeeded; and their respective modes of proceeding mark both the character and comparative value of their efforts."

Well, in all this there is, perhaps, nothing very extraordinary (upon the supposition that Mr. Cheverton's statement is true.) Euler belonged to that useless race of men called mathematicians (according to the Chevertonian philosophy), and Mr. Dollond (Mr. John Dollond I presume he means) was certainly a first rate optician; not only so, but *also* (much to his discredit, no doubt,) a clever mathematician, and an able astronomer.

Mr. James Gregory, professor of mathematics in St. Andrew's, as it appears from his "Optica Promota," showed how a telescope with specula might be constructed; but this unfortunate mathematician being neither an artist, nor having any turn for practical mechanics, was himself incapable of realizing his own invention by an actual construction, although he had demonstrated that to form a perfect image of the object the speculum must have the form of a parabola. I might here, Mr. Editor, pause to inquire whether the arts or science at this period were in advance: but the question would carry its answer along with it. The unfortunate Gregory could not find a single artist in his own country that could grind a speculum for him. Poor Scotland! this appears to be a stain upon your escutcheon. But why, it may be asked, did not Gregory apply to some of the English artists? The

answer is easily given. They were not, at this period, one jot farther advanced in the arts than their northern neighbors.

Soon after the period just alluded to, the immortal Newton found himself compelled to relinquish for a time his philosophical pursuits, and betake himself to the mechanical art of grinding specula. His first attempt was to construct a reflecting telescope according to the principles of his friend Gregory, that is, with a parabolic speculum. In this, however, he did not succeed; but he succeeded in making two reflectors with his own hands, which he presented to the Royal Society in 1672, the great speculums of both being of a spherical figure, although he was fully aware of the superiority of the parabolic form. During the interval he was employed in making his reflectors, he tried his hands upon constructing a refracting telescope which had been prepared by Descartes, the object of which was to *grind the lenses* into one of the figures of a conic section; and when employed in this pursuit, he made his grand discovery of the various refrangibility of the rays of light, from which he concluded, that the errors arising from the spherical figure of the lens were small in comparison with those which arose from refrangibility. He therefore gave up the attempt of constructing refracting telescopes, considering that the divergency of the rays of light, arising from the difference of their refrangibility, was always in proportion to the refracting powers of the medium. In consequence of this opinion of Sir Isaac Newton respecting refracting telescopes, all attempts to construct them free from the effects of refrangibility were, for a period of nearly seventy years, laid aside. However, some time about the year 1753, Mr. John Dollond, after many optical experiments, discovered that the refractions of two prisms, when made of different kinds of glass, might be equal, and that the difference of their refrangibility might be considerable; and that there might be equal divergency with different degrees of refraction; in short, that refraction might be produced without colors. Acting from these principles, Mr. Dollond was the first artist that produced a correct achromatic refracting telescope. And here I will ask Mr. Cheverton, if the odium, which he attaches to Euler on this head, ought not on all these accounts to have been fathered upon Newton?

I wait for his reply. I have lots more in store for him.

I am sir, yours, &c,

LEWIS FREND.

St. John's Wood, Aug. 9, 1834.

A Few More Words in Behalf of Mathematical Science.

[From the London Mechanics' Magazine.]

Mr. EDITOR,—As I find I must be absent from London for two or three weeks, I will not have an opportunity during that time, of continuing my appeal in behalf of mathematical science; and as my last short article will hardly be a mouthful for your highly gifted correspondent, Mr. Cheverton, I beg leave to give him one morsel more before I take my departure.

LEWIS FREND.

St. John's Wood, Aug. 17, 1834.

Notwithstanding the opinion expressed by Sir I. Newton on the effects of refrangibility on the refracting telescope, Euler, it appears, (although a rigid disciple of the Newtonian philosophy,) was not satisfied; for we find that in 1747 he tried to prove the possibility of destroying the effects of colors on the focal image, by imitating the structure of the eye, which he considered to be the most perfect of all optical instruments.* He proposed to construct a convex lens, having its cavity filled with water, from which he expected to produce distinct vision, freed from the effects of refrangibility, and also from the aberration produced by the spherical figure of the lens. He, however, did not altogether succeed—in all probability for the same cause that Gregory failed. In truth, he was not a practical optician; pure intellect was the region of all his speculations. In 1752, Mr. John Dollond communicated to the Royal Society of London, a paper endeavoring to show that the principles advanced by Euler were quite at variance with those deduced from Sir I. Newton's experiments on the refrangibility of light; although, at the same time, it was doubtful if either the one or the other of their theories were consonant with the laws of nature. On this subject the scientific world were much divided in their opinions. At last Mr. Dollond, in order to satisfy himself, had recourse to experiments, the result of which was, that he found that he was wrong himself, and that Euler was right. Being thus cured of his former prejudices, although not liking the expedient of enclosing water in the lens, he at last, after four or five years of fatiguing research, succeeded in constructing an achromatic refracting telescope, in the way mentioned in my first article. And here, Mr. Editor, I cannot help thinking, that although Euler did not succeed, still the discoveries he made as to the method of destroying the errors arising from the effects of colors on the extremities of the focal image were the means of directing Mr. Dollond in his construction of the first refracting telescope, which he produced in the year 1757. However, be that as it may, he was more fortunate than Mr. James Gregory; he lived to see, and was one of the first to congratulate Mr. Dollond on his great achievement. He was too much of a sage to indulge in any peevish reflections on this seeming triumph of Mr. Dollond. Different was the fate of Mr. James Gregory: he did not live to see a construction of his reflector, according to his own principles, although Newton with his own hands had attempted it. However, in 1724, Mr. James Short, a first rate artist, and highly celebrated for his mathematical and astronomical attainments, succeeded in constructing a telescope according to the principles of the first inventor.

What Mr. Cheverton means when he says that the most valuable method of determining the longitude is by means of the telescope constructed upon the principles of Mr. Dollond, I am at a loss to guess. Does he mean that of finding the longitude at sea?† If so, I am compelled to inform him that he knows nothing about the matter. Hadley's reflecting quadrant and sectant, as improved by Ramsden's dividing engine, must rank as one of the greatest mechanical discoveries that ever was made in aid of nautical (or, I might add, practical,) astronomy. It is now universally used at sea for determining the longitude. While mentioning the names of Dollond, Short, Hadley, and Ramsden, those of Graham and Bird ought not to be forgotten; they equally distinguished themselves in their various mechanical and optical discoveries. The only charge that can be brought against them that can diminish their reputation in Mr. Cheverton's estimation, is that they were all more or less addicted to the useful studies of geometry and astronomy. Indeed, I have heard that one of them (whose name perhaps it would be improper to mention) indulged himself in the sinful practice of acquiring a knowledge of the higher analysis.

I shall have yet something further to say at a future opportunity; meanwhile, I beg to subscribe myself, Mr. Editor, your very obedient servant,

LEWIS FREND.

MECHANIC POWERS.—An experiment was made at Brussels on the 16th, at the house of the mechanician Lemaire, *rue de l'Eskylier*, No. 10, with a machine moved by a force not hitherto employed in mechanics. That force is Galvanism, which developes the magnetic property of iron. The new machine is composed of a flying (*volant*) horizontal wheel of copper, in the plane of which is placed a bar of iron, rendered magnetic by a galvanic pile. The bar carries round the wheel between two fixed magnets, but as soon as the ends of the bar reach the points of equilibrium, the electric current changes its relations, and replaces by repulsion the attraction which directs the bar. The latter, in consequence of the accelerated motion it has acquired, passes the position of equilibrium, and continues its rotary motion in the same direction. The experiment had complete success. The machine moved upwards of an hour, and its accelerated motion excited hopes that it may be ere long employed to move considerable masses. The great magnetic energy given to magnetism by a galvanic current is already well known, and be that, however, as it may, mechanics will henceforth be in possession of a new power. The machine, constructed with great care and success by Lemaire, was the invention of a Professor of Brussels, M. Guillery.—[Courrier Francaise, Aug. 4, 1834.]

It may be made a question, whether the machine put into operation at Brussels can, with strict propriety, be designated a new mechanic power, whatever may be the useful purposes to which it may be applied. The latter is, indeed, the only important subject of inquiry as regards that or any other invention or discovery.

Is there not a real and long known mechanic power, which has yet never been enumerated amongst those so entitled? We answer, there is such a power, and it is the pendulum. And more, the pendulum is the *power* of all others by which the greatest weight can be raised and moved by the least *force*. In many situations also, the pendulum could be applied to great effect, as, for instance, in stone quarries, in warehouses, to facilitate innumerable operations, in the lading and unlading vessels at wharves, &c.

Though simple in itself, very few persons reflect that in moving a pendulum, every

* I do not know what Euler's opinion on this head might have been 19 years afterwards, when, unfortunately for himself and science, he became totally blind.

† The writer of this article has had considerable practice, both at sea and land, in taking and working lunar observations.

point in it is actually raised, as the axis is a radius of a circle, the centre of which is the point of suspension. The pendulum again is a power admitting the aid indefinitely of accelerated motion, admitting, however, that moving on the principle of the sling, as the motion would be accelerated, a centrifugal force would be produced in direct ratio with the rapidity given to the machine.

These hints on the pendulum are thrown out as recalled to the mind of the writer when translating the account of the Belgian machine, and may have been, and probably actually have been, suggested by others, as the subject seems too obvious not to have occupied minds engaged on the subject of mechanic forces.—[Nat. Intel.]

To the Editor of the N. Y. American :

The practicability and safety of navigating our coast by steam, being fully established by the success of the line of Steamers between this port and Charleston. I beg, through the medium of your Journal, to call public attention to the immediate formation of a line between New York and New Orleans, via the isthmus of Florida, by which the mails and passengers can to transported in nine days from port to port.

Two separate companies have already been started, one in Boston, the other in Savannah, with the intention of applying next winter to the Assembly of Florida, for an act of incorporation to construct a Railroad from the St. John's of Mexico. It will require time to construct a railroad; and the distance by land is so short, that the line might at once be formed, by placing post coaches and horses on the road across the Isthmus, which would run over a high dry ridge, and would be made at an expense of $50 to $100 per mile; and from much conversation with merchants of New Orleans and Savannah, I feel authorized to say, that provided the whole line is arranged, the former will provide steamers to run between the Savannah and New Orleans, and the latter transport the mail and the passengers from the Savannah to the St. John's River in a steamer, and provide post coaches to take them across the Isthmus.

The communication between New York and Charleston is already established, and materials exist for the formation of the remainder of the line, if brought together: and in the hopes that something may be done at once to connect this city with the Great Cotton Market of the South, I annex the outlines of the proposed route. Yours,

New York, 24th Nov., 1834. R. P.

Memo. of proposed route.

	miles.	*hours.*
New York to Charleston,	650	90
Charleston to Savannah,	90	12
Savannah to forks of Black Creek, (tributary to the St. John's River,)	210	30
Navigable for Steamers of the largest class.		
Forks of Black Creek to Suwannee river on Gulf of Mexico,	50	12
A harbor has lately been discovered at the mouth of the Suwannee admitting vessels of 12 or 14 ft. draught.		
Suwannee river to New Orleans	500	72
	1500	216
	Or	9 days.

There are converient bays every 30 or 40 miles all along the Gulf of Mexico, which would afford safe harbors of Refuge in case of storm.

Railroad Accident and escape from Danger.—The Gazette mentions that on Tuesday afternoon, the half past two o'clock car from Newark, was driven, by the carelessness of the driver, into the aperture occasioned by opening the drawer of the bridge over the Passaick, for a vessel to pass, with a concussion that injured many of the passengers, about twenty in number, severely. Fortunately, the frame work of the bridge sustained the car, and probably saved the lives of many, as the distance the horses were precipitated was about twenty feet or more. The escape is almost miraculous, and there should be some regulation as to opening the drawer at this bridge, as the declivity is sufficient to very much increase the speed or velocity of the car.

[*From the Baltimore American.*]

The investigation which has been made in reference to the late outrage and murders on the line of the Washington Railroad have led to the arrest of several persons, but nothing has yet transpired which implicates any one in the deed of blood.—From the number of persons concerned in it,—from twenty to thirty have been seen in and about the shanty at the time of the murders,—there is hardly a possibility that the miscreants can escape detection.

From the Gazette we learn that on Saturday night the rioters forcibly entered a tavern kept by Mrs. Harrison, 18½ miles on the Washington turnpike, usually called the half-way, of which they kept possession, appropriating to their own use every thing which they wished. Another party broke into Mr. Wheelock's store, one mile this side of Mrs. Harrison's, and took away all the goods which they could find, the larger quantity having been previously removed by the owner.

The citizens of Ann Arundel county have met at Waterloo, and have established a guard to assist in keeping the peace, which, with the effort of private individuals and other measures now in progress, it is thought will restore tranquility.

P. S.—The last accounts,—received since the above was in type,—represented that the infatuated wretches at the scene of the late outrage continued in a state of high and violent excitement, and seem determined to set at defiance all restraint or law.—They have now become the terror of the surrounding country, and there no longer remains any question but that the most prompt and efficient measures have become indispensable for their apprehension and punishment.

A detachment from the Light Brigade, with Captain Bouldin's troop of the Third Brigade, under the command of Lieut. Col. Campbell, has been ordered to the Washington Railroad, and will leave the depot in Charles street at 9 o'clock (or soon after) this morning.

It is hoped that the companies detached will be full and there is no doubt that the service for which they are detailed will be well performed.

Sculpture.—The eyes of amateurs have been lately agreeably directed to an excellent bust of the venerable John Watts by Hughes, exhibited for a few days past in the Exchange; and we have now to mention that Frazee has (through the liberality of Mr. George Rapelje of this city) just completed a work, which, though unambitious of its kind, is yet one of the most tasteful and delicately finished productions of his chisel.

It is a monument erected in Grace Church to the lamented Mr. Colden, bearing upon it a fine medallion likeness of that distinguished citizen, and graced with the following inscription:

To the memory of
Cadwallader D. Colden,
For several years Mayor of this city, a Senator of this State,
And one of its representatives in the Congress of the U. S.
His talents and public services added a lustre to these and many
other honors and trusts bestowed upon him by his native city.
He was alike eminent for legal learning and eloquence,
for ardent love and pursuit of general science,
and for successful application of all his acquirements
to the best interests of his country.
As his philanthropy and patriotism
commanded the confidence and attachment of his
fellow citizens;
so his kindness, frankness, and generosity,
won the warm affections of his family and numerous friends.
By one of whom, who, having witnessed most nearly,
can best estimate his worth,
this monument is erected.

Earthquake in Santa Martha.—Advices from Angostura give some particulars of the destruction of Santa Martha by earthquake, respecting which so many reports have been current. They are furnished by advices from Caracoas, which mention that at the latter end of May the eruption of a frightful volcano, preceded and succeded by forty-five shocks of earthquake, had caused a part of the town to be submerged. Almost all the buildings had been destroyed, both great and small, but it was not suppresd the loss of life had been great, as the population had fled to the woods by which the surrounding heights were covered. Some few houses remained standing among the mass of ruin, but the whole neighborhood was one scene of desolation and misery, and the inhabitants depending upon chance for a precarious subsistence.

Temperance Societies and Temperance reform which have produced so vast an amount of unquestionable good in this country, where first they were seriously undertaken, are, we are glad to find, making their way successfully in England.—It is another installment paid of the debt we owe to the mother country, for the many benefits derived from her precepts, and her example; that we have thus given her the theory and the practice of Temperance Socities.

We have before us some letters and statements on this subject, from Birmingham, which, as most of our readers know is a large manufacturing city of England, very populous, and the mass of its population operatives. Subject as this mass is to be thrown out of employment by any checks or disasters in trade, and—by reason of great competition and of the mischievous construction of the poor laws, which have been perverted to support able bodied working men, instead of the cripple, the aged, or the infirm—receiving in the best times barely wages enough to support life—it will be at once perceived that to such a population the temptations to intemperance as drowning for a time at least the sense of suffering and the hopelessness of want, must be very powerful. If then the voice of the advocate of temperance can be made to provail there—and the *ascertained* facts be circulated which prove that strong drinks are more fatal to comfort, health and happiness, than even the lowest wages—a great step will be already gained in the good cause. That such is actually the case now in Birmingham, will be gathered from the extract we subjoin:

Extract of a letter from Mr. Chapman, dated Birmingham, 27th August.

I have already told you, that Mr. Livesey's admirable lectures had made a deep impression, and from what I had heard, I suggested the *probability*, that if some mechanics, pupils of Mr. Livesey, and accustomed to discussion from Preston, were to come here, our men might catch the flame, and then we might go on with our own lamps. A few friends met, and at length we agreed to try the effect. Mr. Livesey sent us a blacksmith, a shoemaker and tailor, and what between the *fire* of the *blacksmith*, the *awl* of the *shoemaker*, and the *needle* of the *tailor*; Birmingham is in a tremendous storm. Our friends commenced on Tuesday evening, the 12th instant, at the large chapel, in Livery street, which we engaged for the occasion. Here, also, on Wednesday, Thursday, and Friday evenings to crowded meetings of mechanics, did our Temperance heroes defend themselves against all gainsayers. They are advocates of the most exclusive system a Rechbite could desire; they touch "neither wine nor strong drink." After all this, I hoped, though not confidently, that we had gained a point, and I ventured to give notice on Friday evening, (as our Preston friends were to return next day,) that the Birmingham mechanics should have an opportunity of trying their skill on the following Tuesday evening; when the evening arrived, the chapel was crowded, and after having persuaded one mechanic to take the Chair, and another to commence addressing the audience, we soon got to work, and a glorious night it was. I had adopted this plan before, telling the men that it was *their* meeting, they should have a mechanic in the Chair, which was adopted each night. My old friend *Brittain*, whose interesting letter you must have seen, presided the first night; on another, a notorious but reformed drunkard, a *razor grinder*, was our *Præses, and remarkably well they managed*. On another occasion a *button maker*, and at another, a tailor. Before the meeting closed on Tuesday night, I informed the audience, that I had procured the use of the chapel for the week, and if they wished the meetings to continue, they need only to say so; a burst of acclama-

tion at once settled the point, and up to Friday night, they have been kept up with unabated energy; I then postponed them until yesterday evening, (Tuesday,) when we had another meeting equally full and encouraging. This advance is ascribable to two causes. 1st, The searching character of the addresses, with respect to the nutricious qualities of *ale*, by the Preston mechanics; and 2d, The interest men feel in hearing discussions by those of their own class. In Lancashire, they now use a term peculiar to themselves;—they call an *abstinent*, a *tee-totaller*; that is, he totally abstains from all intoxicating drinks. The pressing of this point, so directly crossed the path of our prejudices, that it could not but produce discussion, discussion has lead the trial, and trial to conviction in many, that strong drinks are wholly unnecessary. Of course, there are conplicating opinions, but not one apologist now rises for spirit-drinking! This is a great advance of public opinion. Still, of course, there are many who indulge in this vicious habit; but the time appears just approaching when drinking to excess in public will not be tolerated, and when private tippling will have very few admirers. I anticipate this change from the way in which the Temperance reform, will probably be ultimately worked in England. There is an energy of character in English mechanics, which when once roused, is not easily controlled. Many events of late have proved this. But hitherto, all their movements have been accompanied by intemperance, and their efforts have been directed to the removal of effects, leaving the causes untouched. Bubble after bubble has floated before them, and they have as eagerly chased them; yet they have not advanced one step; at least, their wives and children are as short of clothes, and their cottages of furniture, as ever. And why this? simply because, no matter what, their wages were, they went in drink; and for this the Tailor and the Shoemaker contended just as regularly as the Blacksmith, or the Sawyer. Now the following is seen through: The leaven is working; one workman tells another; the points are discussed; but what chance has an emaciated body, and an empty purse with a worthless character, against health, and comfort, and respectability? These are witnesses, which laugh opposition into nothingness.—But these witnesses are sure, and they are working too: and what master, who can have a steady, sober, good workman, will be plagued with a drunkard? It is like a smart, active little enemy battering the hide of an unwieldy antagonist. He stands no chance. Now this feeling is precisely what has commenced here. It will be carried to other large towns by mechanics: and so spreading from one town to another, the cause will advance with giant steps. From the large towns, it will drop into the small ones; and from them into the villages. In the meantime, the tree will bring its fruit to perfection; and the more it bears, the more it will thrive. The real property of this country is so great, that it *can* almost accomplish any thing *possible*; it has performed prodigies, while a canker worm has been consuming its vitals—while *two millions* of *pounds* sterling have every week been *spent* or *sacrificed* to the demon INTEMPERANCE. But when this *maelstrom* to all prosperity shall cease, when popular opinion set in, in another opposite direction, who shall tell the effect?

The writer then enters into further reasoning on the subject, all expressive of his faith that "the little cloud which has crossed the western ocean, spreading far and wide, and distilling the dews of mercy," will prove a mighty instrument in advancing the great cause so dear alike to humanity and religion.

In a subsequent letter of 22d Sept., the same ardent friend of the cause writes,—

"Temperance is going on here finely. It is indeed Temperance! No half way way measures will do. Our new converts outrun the old ones, and the old find they must become *abstinents*, or give it up, so far behind does the zeal of the *teetotallers* leave half-measure men. By the bye, I am surprized to find that our best men are more and more convinced that even ale is not necessary, but absolutely injurious, though taken moderately. They explain the objection to it to be, that it produces inability to take sufficient eatables, particularly at breakfast. You would be delighted to see the energy of our mechanic's now. They fixed to have two open-air meetings yesterday (Sunday) in two of the worst parts of the town. Scarcely a night now passes but they have a meeting. I have a small still which I carry to these meetings and use in extracting the spirit from ale, in the presence of the people, and then I burn the Devil. The effect of this is tremendous."

The writer expresses his confidence, that the spirit which animates the mechanics of Birmingham, would soon extend to other large towns, and thence into the villages and hamlets. In conclusion, he relates the following anecdote:

At a late and large Temperance meeting, held at Livery street Chapel, Birmingham, England, while Mr. Chapman the Secretary was speaking, an old soldier who sat before him, interrupted him by calling out, "*he had often proved a glass of rum to be a good thing; and that he had served in the hot and in the cold, particularly in the Indies.*" "Very well," said Mr. C., "there are many here who can recollect that when Bonaparte was in Egypt, there was a strong force marched across the Great Desart of Arabia to meet him on the sands of Egypt." "Yes," cried the veteran, "*I do for one, and was one who was in that march.*" "Well then," said the Speaker, the meeting rising in excitement as he proceeded, "I ask you now, my old friend, whether in consequence of the difficulty of carriage, the army, though subjected to the severest fatigue and incessant toil, were without any spirit rations at all?" "*That's true,*" cried the veteran. "Yes," said Mr. C., "and Sir James M'Gregor, the Surgeon General of the forces, repeated that the effect was such, that though the men marched under a burning sun of from 114 to 118 deg. of Farenheit, THE INDIAN ARMY WAS NEVER SO HEALTHY." Thunders of applause hailed the testimony; while a great point was gained in another view of the case. The meeting had before it a living witness to the truth of a statement, which, though made without reference to Temperance Societies, proves beyond the power of contradiction, that the principles are as the basis of the earth itself.

Might we not here borrow from Birmingham, the excellent notion of mechanics meeting, for the discussion and advancement of the doctrines of temperance? In this way, good men are good examples, although a rolling ocean intervene, act and re-act upon each other, in the promotion of a great common cause.

Description of Panama.—"Panama is principally built of stone, stuccoed. The houses are spacious and substantial, and generally three stories in height, as the place is not subject to violent earthquakes. The city bears a look of departed grandeur. The churches are spacious, and are built in the fantastic style of architecture introduced into Spain by the Moors. There are a number of extensive convents, most ruinous and untenanted. In one of them that overlooks the walls of the city and the bay, a few sallow, withered, and melancholy looking nuns were occasionally to be seen at the windows. The Government houses is a fine stone building; but a tank of hewn stone in which a fountain (now dry,) formerly played, the broken marble pavement of the grand hall, the defaced balustrades of richly carved stone, and the once painted ceilings now mouldy discolored, and crumbling, only showing in spots traces of the original designs, all tell of decay and poverty.

"The general aspect of the city comports with the desolate appearance of the public edifices: every thing has the same look of decay. Grass springs up between the stones of the pavement; the stucco has fallen in patches from the walls of the houses; troops of the black carrion vulture sit ranged in files along the roofs, or hop unconcernedly about the streets, as they are never molested, being the only scavengers; the inhabitants, sallow and miserable from the effects of the noxious climate, stroll listlessly along the streets, or sit in the doorways and belconies dozing away life. The city is said to contain seven thousand inhabitants, of which about seven-eighths are black and brown. No such thing as a hotel or tavern is known in the second floor of a house large enough to have quartered a regiment.

"Panama is a walled town; and that part of the walls which borders on the bay, is very fine masonry, thirty feet broad at the top, forming a beautiful promenade, commanding a view of the lovely bay, and much frequented during the fine season. Very few cannon are remaining on the walls, which are undermined in two or three places by the tide. On the left of the town stretches a long beautiful beach of fine white sand, narrow, and bordered by a dense thicket of luxuriant foliage, as if vegetation grudged space for the flow of the tide. At intervals, the thicket is interrupted by the palm thatched cottage of the natives, overshadowed by lofty cocoa nut trees, in front and on the right, as far as the eye can reach, the bay is dotted with small, green, fairy-looking islands, all together forming a picture whose beauty I have rarely seen equalled. The pearl fishery is still pursued in these islands, and large quantities of beautiful pearls are annually procured. Foreign vessels are forbidden to touch at these islands without special permission from government, under pain of forfeiture. Green turtle are abundant about these islands, but the islanders will not suffer them to be caught, as they assert that the sharks feed on them; and that, by lessening the supply, these voracious fish will be rendered ravenous, and more likely to attack the divers. As it is, accidents happen often. The bay is the resort of immense flocks of pelicans and other water fowl, which find in the abundance of fish an easy subsistance; and which, at sunset, wing their way in long-drawn lines, from the shore to their roosts in the islands, and by their noiseless and even flight to their places of rest, add to the idea of repose which the whole scene at this hour so strongly suggests."—[Terry's Travels in South America.]

Russian Tyranny.—THORN, SEPT. 26.—*General Biernacki.*—It is our painful task to announce the death of the brave Polish General Biernacki, brother of the Minister of Finance of the national government. He expired in the Russian dungeons, at Zamosc. The name of this General ought to be well known in France. He distinguished himself in the wars of Italy and Poland; he fought gallantly at Trebia by the side of Dombrowski, and in 1812 he commanded the advanced posts of General Regnier at Kalisch. In this battle he was dangerously wounded, and taken prisoner by the Russians.—Joseph Biernacki appeared again in the revolution of 1830, and put himself at the head of a *corps d'armée* in the district of Kalisch. When the brute force of the Autocrat triumphed in Poland, the General, seeing it impossible to escape, retired to his estates, and remained unmolested. In 1833, Major Wrinicki, returned to Poland from France. He remained concealed upon the property of Joseph Biernacki. The government having obtained possession of this fact ordered the arrest of General Biernacki, and that honorable man, refusing to denounce the patriot, was, by military commission, sentenced to three years' confinement in the dungeons of the fortress of Zamosc. He has fallen a victim to the severity of Russia, leaving a wife and four children to deplore his loss. Major Wrincki was shot some time ago.

Important Invention.—Dr. Majendie has made a report to the Academie des Sciences upon an instrument invented by Dr. Hérisson, called the Sphygomomètre, which shows the rate of the pulse, its rhythm, and anomalies. In pursuance of the conclusions of the eminent reporter, the Academy passed a vote of thanks to the author of this most useful and ingenious discovery. Dr. Hérisson has published a memoir, showing the results of his several applications of this instrument in studying the disease of the heart. After six years of clinical researches, supported by numerous anatomical proofs, it is found capable of distinguishing organic affections from cases which only assume the appearance of such affections. As the Sphygomomètre gives the numerical force of the pulse, it has now become possible, according to the observations of Dr. Hérisson, to prevent such attacks of apoplexy as arise from a too great determination of the blood towards the head. By this instrument also, may be calculated the effect of blood-letting upon the strength of a patient. It is, therefore, a most important invention, and must excite the attention of all persons, whether French or foreigners, who are capable of appreciating its qualities.—[Galignani's Messenger.]

A Lapland Summer, including also what in other countries is called Spring and Autumn, consists of fifty-six days, as follows:

June 23, Snow melts,
July 1, Snow gone,
9, Fields quite green,
17, Plants at full growth,
25, Plants in full blow,
Aug. 2, Fruits ripe,
10, Plants shed their seeds,
18, Snow.

From this time to June 23, the ground is every where covered with snow, and the water with ice.

The Royal Yacht Club, at the close of the present season, consisted of 148 members, owning 101 vessels of 10,000 tons burden, and employing, during the season, not less than 1200 seamen.

NEW-YORK AMERICAN.

NOVEMBER 22—28, 1834.

LITERARY NOTICES.

THE CONSTITUTIONAL GUIDE; comprising the Constitution of the United States, with Notes and Commentaries from the writings of Story, Kent, Madison, &c. Compiled by R. K. MOULTON. New-York, G. & C. CARVILL & Co.—We rejoice at finding that so many persons are turning their attention to the study and exposition of the Constitution, looking upon the spirit which prompts these researches and publications as surely indicating a salutary bias of the public mind towards such inquiries.

The Guide here offered by Mr. Moulton is an excellent one; differing, at the same time, in many particulars from any we have seen before. The text of the Constitution is carefully printed in exact and literal conformity with the original MS. on file in the State Department; and to each article notes are annexed at the bottom of the page from the Federalist, the Commentaries of Judge Story, those of Chancellor Kent, and from Wheaton's Reports, shewing the actual construction given to every provision which has been made the subject of a question. There are too dissertations in the same form of Notes, by the Compiler, in more immediate reference to questions of recent occurrence, which evince patient research, and, as we view it, a just perception of the true spirit and intent of the Constitution. Among these original views, we particularize as especially deserving of notice, an examination of the doctrines of the Protest—an inquiry into the right of the President to dismiss at pleasure all or any officers for opinion's sake—and a discussion of his claim to direct the conduct of Executive officers in matters confided by law to their individual discretion. Much as all these points have been mooted, there will be found strength and originality in the exposition of them by Mr. Moulton.

A second part of this volume, and making nearly one half of its bulk, is devoted to "a Legislative and documentary history of the Banks of the U. States," with notes and comments by Mr. M. The same searching spirit, fairness of investigation, and decision in the statement of conclusions drawn after laborious investigation, are apparent in this, as in the former part of the book; which, as a whole, we cordially recommend to all who would have a great deal of good doctrine and useful information in a small compass.

SELF-CONTROL, a Novel; by MARY BRUNTON, 2 vols.; KEY & BIDDLE, Philadelphia.—This republication of a novel of some standing and of approved merits, is well-timed and judicious. Its title denotes its moral; which is the necessity and advantage of accomplishing that most difficult of all victories—the mastery of one's self. It is not, however, a prosing homily; but a tale full of incident and adventure.

THREE YEARS IN THE PACIFIC, including notices of Brazil, Chili, Bolivia and Peru, *by an Officer of the U. S. Navy;* 1 vol. 8vo; *Philad., Carey, Lea and Blanchard.*—This is an agreeable volume, written in a sketchy, off-hand style, and presenting the impressions of an observing and intelligent man on the passing scenes of the countries—new yet in so many respects even to us, the inhabitants of the same continent—through which he flitted.

It has the merit of vivacity, without the pretension of judging in a ten days visit, the manners, habits, intelligence, &c. &c., of a whole nation.

NOUVELLE ET SIMPLE METHODE DE LANGUE FRANÇAISE; par E. C. S'ALME. New York: CHARLES DE BEBR.

FIRST GUIDE TO THE ITALIAN LANGUAGE; by L. L. DAPONTE. New York: CHARLES DE BEBR.

The first of these Grammars, or Guides to a foreign language, is only adapted to such as have already acquired some knowledge of French. For these, and for those to whom French is a native language which they have nevertheless not studied, this Simple Method will be of use.

The First Guide to the Italian Language is short, clear and explanatory, without being incumbered with rules, or unintoresting dissertations. It is a little pamphlet, in English, which the frequenters of the Opera, among others, might find benefit in studying.

THE PROTESTANT EPISCOPAL PULPIT, for November; N. York, JOHN MOORE.—This number has a sermon by the late *Dr. Jas. Montgomery*, of St. Stephen's Church, Philadelphia, (formerly of Grace Church here,) on the "Service of the Church," its meaning, excellence, &c. Prefixed to the sermon, is a feeling and interesting memoir, by Bishop Doane of New Jersey, of his departed friend and fellow laborer in the vineyard.

VATHEK, AN ORIENTAL TALE, BY MR. BECKFORD, 1 vol. 18mo. Carey, Lea & Blanchard.—This is the second American from the last London edition of the most admired work of the accomplished author of "Italy," corrected by himself. The work to which Byron allowed that he was indebted for the best of his Eastern imagery, has been long enough before the public to be established as a classic.

FEMALE CONVENTS, or Secrets of Nunneries disclosed, compiled from the MS. Memoirs of *Scipio Ricci*, Catholic Bishop of Pistoia, by MR. DE POTTER; N. York, D. Appleton & Co.—This is not a work of imagination or of bigotry, but the result of developments forced upon the attention of a Catholic community by the persevering efforts of an Apostolical Bishop, to make his religion and those who are set apart and dedicated to it, what they should be—pure and holy. To say that it proves the tendency to abuse, disorder, and crime, of monastic institutions, is only to repeat what all reflecting Protestants who understand human nature, were before apprised of. The object of its present publication here, would seem, by a profatory address, to be, to put Protestant parents in America on their guard against the great efforts said to be making to spread the monastic and religious institutions of Catholicism among us. In this view it is a fair, and, at the same time, formidable publication—for its authenticity, we apprehend, is undeniable, and its developments certainly most startling.

CALAVAR, OR THE KNIGHT OF THE CONQUEST, a Tale of Mexico; 2 vols. Carey, Lea & Blanchard, Philadelphia.—We have not had time to read this novel, but a friend in whose taste and judgment in such matters we confide, has sent us the following notice of it. We learn from the National Gazette that Calavar is the subject of a commendatory article in the forthcoming number of the American Quarterly Review:

"Dr. Bird, has given to the world a romance entirely free from those errors and imperfections which disfigure, in a greater or less degree, every other American novel. Unquestionably he has taken *time* to accomplish this: he is evidently divested of that short-sighted ambition which has been injurious to at least one distinguished American writer, and which will ruin all who continue its pursuit—the ambition of writing novels *as fast* as Sir Walter Scott; but he can rest from his present labor with the reflection that the *time* occupied in literary composition bears an auspicious proportion to the time which the work produced may be expected to endure. Of novels, especially, we believe it is true, that those which are soonest written will be soonest forgotten—always excepting the works of the author of Waverly, whose pre-eminet genius seems to place him beyond general rules: and our American writers need no counsel so much as this—read, revise and correct *deliberately* before you publish.

Calavar is not only singularly free from those imperfections which are the inevitable result of hasty or careless composition; but it is, moreover, singularly finished and complete in those particulars where novels, usually, are utterly defective. The "amities" are perfectly preserved throughout: poetical probability is never transgressed: curiosity is satisfied: and the quaint language of three centuries ago is sustained with unwavering consistency, and with a force and elegance of composition rarely, if ever, surpassed. It is without question the best American novel that has yet appeared; and what we principally wonder at is that a writer of such exalted abilities should have kept the world so long in ignorance of the extent of his power.

One thing that we specially like in Calavar, is the *omission* of quotations at the beginnings of the chapters. Scott had genius and taste sufficient to make this sort of caption a positive embellishment; and Bulwer has imitated him with some success; but, for the most part, all others, by *attempting* the imitation, have merely illustrated the difference between reality and appearance—sense and nonsense.

TRAVELS IN THE EQUATORIAL REGIONS OF SOUTH AMERICA, BY ADRIAN R. TERRY, M. D.; 1 volume; COOKE & Co., Hartford.—Americans are allowed, we believe, to be the most locomotive people on the face of the earth; but as book-making is not one of their propensities, they so seldom give the result of their observations to the public, that almost all our impressions of foreign countries come through the medium of the British press: A medium not altogether so candid and impartial, judging by the view it gives us of things in this country, that we can rely with confidence upon the coloring which it imparts to objects. It is, therefore, with peculiar pleasure that we alway take up a book of travels by an American; for if we can never become acquainted with the manners and customs of other people without swallowing a certain quantum of national prejudice administered by the writer, it is certainly some recommendation that the potion should be manufactured at home by a countryman. The work of Dr. Terry, however, is remarkably free from any of those narrow views which impair the value of so many books of travel. It contains a great deal of valuable information in relation to a country whose interests are becoming daily more interwoven with ours; and its various sketches of scenery and manners in South America are thrown off with great ease and a total want of pretension. Travelling on horseback in so unsettled and romantic a country, must, to a young and adventurous spirit, have been extremely delightful; and we only regret that Doctor Terry has not enriched and imparted stronger character to his work, by the more frequent introduction of those little personal adventures among wild scenes and encounters with strange people, which, while they create a degree of interest in the author himself, serve to convey the most vivid impressions of those with whom he associated. It is this happy, dramatic faculty which gives such a charm to the delineations of Spanish life, and such an interest to the various wanderings of the author of "A Year in Spain." The work before us, though we do not know that its essential value would be improved, would certainly be rendered more entertaining by a greater infusion of such material, though it is by no means wholly deficient in it at present. We have already given some brief extracts from it among our miscellanies, but the followiug account of an exploring tour *into* the crater of Pinchachinca, with the other descriptive passages here selected, will bear their own recommendation with them.

Before day-break we were again on our way, wishing to arrive at the top of the mountain as soon as possible, for early in the morning the crater is generally free from the mist which fills it at a later hour. The height of the mountain at the edge

of the crater, is about 15,800 feet above the level of the sea. Mules can approach within about 500 feet of the top; the rest of the ascent must be accomplished on foot. At about sunrise we left our mules and commenced the ascent. The hill is very steep, and composed of small loose masses of lava, which afford but an insecure footing, and together with the rarity of the air render the ascent exceedingly toilsome. Sor Negrete, although, somewhat in the vale of years, astonished us by the vigor with which he pushed up the hill, proving himself fully equal in activity to any of us. When we arrived at the top of the hill the mist had not filled the crater, and we could see to its bottom, from various crevices in which a dense white smoke was issuing.—A stifling smell of sulphurous acid filled the air, and increased the oppression of breathing caused by its rarity. In various parts of the mountainous regions of South America, more especially in Peru, there appears to exist a cause, in addition to the rarity of the air, which oppresses the breathing; the effect of this appears to be far more severe than that produced by the rarity of the air merely. Both are called *zorochi*. The one of which I now speak has been attributed to arsenical vapor; it certainly bears no fixed relation to the elevation, many of the places where it is more severe, being less elevated than when the oppression of the lungs is comparatively slight. Many interesting facts in relation to its effects, were related to me by my companion from Guayaquil, who had travelled much in Peru. He particularly mentioned a small circular plain (the precise location of which in Peru has escaped my memory) surrounded by hills, and only at an elevation of a little more than six thousand feet above the sea, where the zorochi is so severe that it is necessary to let your horse or mule proceed on a walk. A brisk pace for a few yards, will cause them to fall instantly dead. This accident had occurred to this gentleman twice while in Peru; once, if I do not misremember, at this very place. There are reasons which will suggest themselves to every physiologist and chemist, which render it more likely that carbonic acid gas is the agent in the production of this effect, than arsenical vapors.

In the crevices of the black and fantastically-shaped volcanic rocks which arose round the edge of the crater, were small masses of snow and ice; but generally the top of the mountain was free from them. The crater is an immense, yawning abyss, not having the circular form which is generally described as the figure of volcanic openings, but partaking more of the aspect of a ravine. We judged the depth of it to be from fifteen hundred to eighteen hundred feet; and from the point where we stood, could see no obstacle to prevent our reaching the bottom, by following the course of a kind of ravine which was free from large rocks, and which, although rather steeper than the hill on the outside, afforded much better footing. Our Indians had not yet arrived at the top, but we determined to descend quickly, lest the mist should fill the crater; and if we came to any obstacle which we needed the crowbar and cords to overcome, we could wait for them. But we were soon destined to encounter an obstacle against which crowbar and cords were of no avail, and which put a period to our expedition. After we had descended about six hundred feet, we came to a precipice of eight hundred or a thousand feet perpendicular height, the base of which appeared to rest nearly in the bottom of the abyss. In vain did we search for some less precipitous part by which we might descend: the sloping hollow here terminated, and on each side rose high walls of rock, continuous with the face of the precipice. It was an awful place upon which we stood. Life of every kind seemed to have fled in terror from the dangerous vicinity. Not the smallest plant, not even a blade of grass was to be seen. Even the lichens, those children of barren rocks, refused to clothe the scorched and blackened surface of the crags. Not the chirp of a bird, nor the hum of an insect, was to be heard in this abode of silence; and even the condor shunned to soar within reach of the noxious breath of its vapors. Below us lay the mouldering fires of the volcano, and on the opposite side rose black and ragged cliffs, a fit boundary for such a view.

While we were gazing on this, to me, novel and extraordinary scene, the mist began to drive up the chasm from the lower land in which the ravine terminates, and we were soon completely enveloped in a thick fog, which prevented us from seeing a dozen yards in any direction. The mist had a very sensible warmth, compared to the sharp mountain air which we had been breathing a few minutes before. Had we been inclined to trust our lives to the strength of a hide rope, in so long and perilous a descent as that of the cliff before us, the quantity we had with us would not have not availed. There was not enough to reach half way down. Our prospect being destroyed by the mist, and all hope of reaching the bottom by this road gone, we turned to ascend; and on arriving at the top, found our Indians waiting for us. In reply to our questions why they did aot come down, they replied that they were afraid, that yonder was the abode of devils; and truly, it had a most devilish smell.

Dr. Terry has no doubt that, by making a circuit of several miles, and following up the course of the ravine, the bottom of the crater might be reached.

Our other extracts are unavoidably crowded out to-day, but they shall appear hereafter. †

THE LAST DAYS OF POMPEII, by E. L. Bulwer; 2 vols.—New York: *Harper & Brothers.*—There are few of our readers who are not familiar with the theme of Pompeii. With the descriptions of its temples and private dwellings—the new offering upon the altar, and the half drunk wine upon the social board—the priest that ministered and the reveller that quaffed—that were all laid bare to modern eyes after being buried for seventeen centuries. The story, of skeletons found in every familiar position—the sentinel still standing at his post, and the miser clutching his money bags and apparently striving to pierce his way through the dense cloud of ashes by which this devoted city was overwhelmed;—the beauty by her toilet—the butler in the wine vault, and the baker with his scorched loaves, seemingly just taken from the oven beside him—mingles with the most thrilling memories of our childhood, and invests the fate of Pompeii with an interest that can never grow stale.

It is these desolated dwellings and mouldering skeletons—which the labors of sixty years have gradually disinterred from their frightful tomb—that the genius of Bulwer has attempted to re-animate with the sounds and motions that long ago were so fearfully stilled. To say that he has completely succeeded would be awarding him praise such as none but Shakspeare and Scott have yet exacted: to say that he has wholly failed, would be equally far from the truth. The conception of his story is original and striking. The characters are just the phantasmagoria that should move athwart the gloom of such awful scenes; but it must be confessed, that with all the minute topographical details and learned illustration that he has brought to his difficult, perhaps *impossible* task, the execution still falls short of reality. He has achieved a gorgeous picture: he gives us a splendid dramatic representation of 'The Last Days of Pompeii;' but it is not those days themselves which we live over. The tinge of pedantry—sometimes scholastic, and sometimes dandyish—which colors all of Bulwer's brilliant writings, is not indeed so apparent in a work where classical lore must be continually in requisition; but the want of simplicity, which is his greatest defect, prevents the seal of truth from stamping what is otherwise a masterly production. No one can read this work without the liveliest admiration for the powers of its author; but no one will, on a single page, forget the author, in his ideal characters. The feminine devotedness of the high-souled Ione—the classic elegance and Promethean spirit of her Athenian lover—that delicate and elaborately finished creation, their blind attendant—the ast te wiles and magnificent profligacy of the groveling but haughty Egyptian, who is so admirably grouped with them—Olynthus, the heroic Christian, and Lydon, whose springy step we can almost behold in the gladiatorial arena—Nothing can be finer than the drawing of any or all of these, for they are all struck from the canvass with the hand of a master—but they are all *pictures.* Like Mordaunt in the Disowned—Devereux, Isora, Eugene Aram, and all of Mr. Bulwer's most prominant characters, they excite admiration rather than sympathy; they belong to poetry rather than to life. "The last days of Pompeii," however, will, we conceive, take rank with either of these works, unless it be perhaps the last, which is certainly a prodigious favorite in this country. Our national taste is decidedly for the strange, the wild, and the unnatural. Byron is the most popular of poets among us; and there is no writer of fiction whose works are deseminated as widely through the Union as those of Bulwer. He is indeed, we have good reason for believing, a greater favorite in this country than in his own; and as his new work has been there received with the utmost praise, its success here is undoubted. It will be read with pleasure, as one of the most brilliant productions of the day; and it will be recurred to as illustrating some of the most interesting passages of Pliny and Dion Cassius; and offering with "Valerius," and "The Epicurean" the happiest representation of ancient manners through the medium of fiction.

As in a late number of the American, a notice has been taken of Mr. Allston's picture of "Belshazzar's," it will be agreeable to our readers to peruse the following extract relating to that production from Dunlap's forthcoming history of American art and artists?

MR. DUNLAPS work is looked for with so much interest that we consider ourselves happy in being able to anticipate its publication even with so slight a morceau.

"Although my large picture (Belshazzar's Feast) is still unfinished, yet I ought perhaps to say something about it, as many inquiries have been made respecting my progress in it, and the probable time of its being completed. In assigning this reason for speaking of it in this place, I do not mean to admit any *right* in the public to be made acquainted with it; for so far, it is wholly a matter between the subscribers and myself. Still I am not disposed to withhold all information from a very natural curiosity. On some accounts I cannot but feel grattified with the general interest that has been manifested in relation to it. All, however, that I can now say, is, that so soon as it is in my power to apply myself without interruption to the completion of the picture, I shall do it with the utmost alacrity; and that when circumstances will admit of this, it will not take a long time to finish it. If the subscribers to it have been anxious for its completion, many and many-fold greater has been my desire to see it done: and great indeed would be the relief to my mind. I could long ago have finished this and other pictures at large, had my mind been free: for indeed I have *already* bestowed upon it as much mental and manual labor as, under another state of mind, would have completed several such pictures. But to go into the subject of all the obstacles, and the hindrances upon my spirit, would hardly be consistant with delicacy and self respect. Nor could I be far enough understood if I should do it, to answer by it any essential purpose. Those feelings which are most intimately blended with one's nature, and which most powerfully and continuously influence us, are the very feelings which it is most difficult to give any distinct apprehension of to another. For this reason then, as well as for the other assigned by me, I will be silent respecting them. I may add, however, in conclusion, that I have the prospect of a time, not very far distant, when I expect to be in a condition to complete this picture; an event which is not possible for any one to desire more than myself."

Mrs. Butler's Journal.—This work will be issued from the press, *verbatim et literatim*, from Mrs. Butler's original notes, penned at the time of which she speaks. The London edition will be word for word, the same as the American edition; the printed sheets being sent from the city as soon as worked off, to the English publisher. The publication will be simultanous on both sides of the Atlantic.—If on greater familiarity with America, its manners and customs, the first impressions of the authoress are modified, it will be so stated in notes without meddling at all with the body of the work.—[Philadelphia Paper.]

FOREIGN INTELLIGENCE.

LATER FROM FRANCE.—By the Rhone, from Havre, Paris papers to the 23d ult. are received. We take our extracts from the Journal of Commerce. There is very little of general interest in our papers, which, however, are not later than the 16th.

Extract of a letter of the 17th inst. from Cambo, in the Basses-Pyrenees:—"General Mina is still here. His health has undergone a considerable change for the better, and his friends and medical attendants believe that in a few days he will be able to enter upon the campaign. He has, however, not been allowed to resume his usual food, though he mounts on horseback, and talks very cheerfully of himself and his prospects. But, in the opinion of every body, a capital fault has been committed by the Spanish Government in not giving to Mina the undivided command over the revolted provinces.—Half the chances of success are thrown away by this half distrust—half confidence.

Extract of a letter of the 18th inst. from Boulogne. —"The members and subscribers of the Humane Society here, accompanied by several of the authorities, took advantage of the gale, or rather tempest, yesterday, to make trial of the life boat which had just arrived. She acted extremely well, ploughing through the tremendous breakers as they rolled towards the shore, and in almost every respect answered the humane purpose for which it is intended.

The *Semaphore* of Marseilles of the 19th instant has the following:—"M. Ferino, the Receiver General for the Bouches du Rhone, will shortly go to Paris to confer with the Minister of the Finances as to establishing a Bank at Marseilles. It appears that this useful institution will be immediately set on foot in this town. The capital will be two millions of francs."

Accounts from Dieppe and Havre state that considerable damage was done by violent tempests at these ports. The terrace of the bathing-house at Dieppe has been undermined in many places, and the engine-house has been sapped to such an extent that it is only supported by props hastily set up. Great numbers of North American birds have taken refuge in that town. At Havre considerable damage has been done on the beaches of Perrey and Saint-Adress.

LATER FROM LIVERPOOL.—By the *Roscoe* we have our London papers to the 24th, and Liverpool papers to the 25th. They are absolutely barren of news. In Spain and Portugal affairs remain *in statu quo*. The marriage of *Donna Maria* seems to be calculated on with the son of *Beauharnois*—the French minister having remonstrated in vain against it, had left Lisbon.

The death of Earl Derby, remarkable chiefly for his marriage with Miss *Farren* the actress, whom he survived—and for his passion for fighting cocks, he carried so far, as when lately he could not go out, to have them brought ready trimmed and gaffed into his drawing room, and then have a set-too—occurred about the middle of October. He was the grand father of Mr. Stanley.

[*From the London Courier of 23d Oct.*]

PROROGATION OF PARLIAMENT.—Parliament was prorogued this day. The ceremony took place in the Lords' Library, which had been fitted up for the occasion, the members of the House of Commons entering on one side, and the Lord Chancellor and the Peers on the other.

The Lord Chancellor arrived very shortly after two o'clock, and took his seat on the temporary Woolsack prepared for the occasion. The other Commissioners (the Earl of Mulgrave and Lord Auckland) having taken their seats, the Royal Commission for proroguing the Parliament was read.

When the commission had been read, the Lord Chancellor said, "In virtue of this commission to us directed, and in obedience to his Majesty's command, this Parliament is prorogued until Tuesday, the 25th of November."

No mention was made of any other place for holding the Parliament, the words referring to it being "our said Parliament at Westminster."

The attendance of the Peers was more numerous than we recollect for some time past on the mere formal prorogation of Parliament. Among them were Lord Shefton, Lord Strangford, the Earl of Westmorland, Lord Burghersh, the Marquis of Conyngham, &c.

The Commons were represented by Mr. Ley, the Clerk of the House. Sir James Graham and Mr. Stewart Mackenzie were the only members whom we recognised. Lady Burghersh and Lady Manners Sutton were also present.

Governor-General of India.—It was generally circulated on Tuesday evening, at the west end of the town, that the noble Secretary of State for Foreign Affairs (Lord Palmerston) had obtained that splendid prize the Governor-Generalship of India.

We have to record another failure to-day—that of a West India produce broker, in Mincing lane.—[Chronicle.] [This house is, we believe, that of Field & Co. We understand also that an American house, trading under the firm of Jansen & Co., has stopped. Some alarm, we believe, prevails in the city on account of these and other failures, and a great scarcity of money is felt.]—Courier of 22d ult.

Burning of "Windsor Castle."—A very absurd report has been afloat the whole of this morning that Windsor Castle had been burnt to the ground. We have made every inquiry on the subject, and learn that the rumor originated in a house having caught fire in the Vauxhall-road, adjoining to the public-house called the Windsor Castle.—[Sun.]

Another paper says: "Not only in the city, but at various parts of the town, it was currently reported that Windsor Castle was on fire at 3 o'clock this morning, which gained credit for some time. On an inquiry at the coach-offices, it was found to be a public house, called the Windsor Castle, which was on fire. Thus ended the hoax."

Birmingham Musical Festival.—We learn that the net proceeds of this festival, after defraying all expenses, amount to above £7000, which sum goes to the Birmingham General Hospital.

The death of the Earl of Derby, at the age of 82, is mentioned in the Liverpool papers with expressions of regret, as he possessed the best breed of cocks in the Kingdom.

M. Marin.—This celebrated French sculptor, well known by his statute of Tourville, and other works of great merit, died last week in Paris, at the age of seventy-one.

Algiers.—The Algerine Colonization Company is finally constituted. A great number of colonists have set out with their families to occupy, as farmers, some of the lands belonging to the company, which possesses above 30,000 acres in the environs of Algiers. The provinces have concurred with the capital in this great and useful enterprise. The house of Barbet alone has taken 120 shares of 1000 florins each.—[Messager, Sept 19.]

PARIS, OCT. 22.—Last year, a Polish gentleman having caught a stork upon his estate, near Lemberg, put round its neck an iron collar, with the inscription *Hæc ciconia ex Polania*, (this stork comes from Poland,) and set it at liberty. This year the bird returned to the same spot, and was again caught by the same person. It had acquired a new collar of gold, with the inscription, *India cum donis remittit ciconiam Polonis* (India sends back the stork to the Poles with gifts.) The gentleman, after having shown the inscription to his neighbors, again set the bird at liberty.

SUMMARY.

THE GREAT ECLIPSE, which, by a mistake of the date, we made—in a notice of it some days ago—to happen on the 5th of the present month, will occur on the 30th, and be total in the southern parts of the Union.

Already several scientific gentlemen are on their way South, to make observations on this rare and interesting phenomenon.

Professor *Alexander*, of Princeton, has gone to Effingham county, in Georgia, where the darkness will be total.

Captain *Talcott*, of the United States Engineers, will make his observations at Norfolk, Va., where the obscuration will be considerable; and Mr. *Hassler* on Long Island, from his coast surveying station.

Mr. *R. T. Paine*, of Boston, who has charge of the astronomical department of that excellent publication the *American Almanac*, goes to Beaufort, S. C., the most eligible place in the Atlantic States for observing this grand spectacle.

The total import of specie into the the United States, since the 1st December, 1833, is stated in the Washington Globe to be $19,640,576 82. The toamount of the new gold coinage to the 15th inst. is $2,835 900.

Carpenter M'Cleery, Esq. has become part proprietor of the Lancaster Union, a very decided Whig journal, published at Lancaster, (Pa)

The late Jonathan Burrall, whose death was noticed in this paper on Saturday, is thus justly spoken of by the Goshen Democrat.

The character and public services of Mr. Burrall require from us something more than the usual obituary notice. At the age of 23 he joined the northern army, then engaged under General Schuyler, in the memorable champaign of 1776. His peculiar abilities and acquisitions attracted immediate notice, and procured for him the situation of Assistant Paymaster of the forces. He remained in this office until the close of the revolutionary war, when he was chosen by Congress one of the commissioners for settling the accounts of the Commissary and Quartermaster's Departments. He was afterwards appointed Assistant Post master General. Upon the establishment of the Bank of the United States, Mr. Burrall was selected as Cashier of the Branch in the city of New York, and subsequently received from Governor Clinton a nomination as one of the managers of the State lotteries, at a time when public confidence in them had been shaken and the influence of high purity of character was requisite to restore it.

In these, and several other responsible stations in life, he exhibited great strength of understanding, persevering industry, and the most distinguished integrity. His acquisitions in literature were respectable, and in science large and accurate. He united, to a vigorous mind, an amiable temper, and a marked and most undeviating adherence to truth, which won for him during life, and will secure to his memory, the respect and affection of all who knew him.

Death of one of the African Princes.—Charles Bolio, son of Wead Bolio, of Grahway, one of the African Princes sent to this country to be educated, under the care of the Maryland State Colonization Society, died at Baltimore, on Tuesday *morning*, from an effusion upon the lungs.

Dr. Alfred Perkins, of Norwich, Ct. whose death was mentioned in our paper last week, besides several private benefactions, made the following bequests for public objects:

$10,000 to the Library of Yale College,
$3,000 to the Home Missionary Society,
$1,000 to the Bible Society,
$1,000 to the Colonization Society,
$500 to the Sabbath Schools of New London County.

[*From the Charleston Courier of 17th inst.*]

A new steamboat, called the David Crockett, built by Mr. Poyas, was plying about our harbor yesterday, in order to try her machinery. The David Crocket is constructed on a similar principle to that of the Connecticut boat, noticed in our paper some days since, having the wheel in the stern, and like her, is intended to navigate the rivers of Georgia. She is bound to Darien, via Savannah, and will be employed the ensuing season, in towing boats between Darien and Macon, in connexion with the Pioneer line from Macon to Charleston, via Darien.

Lake Steamboat.—A new boat called the Charles Townsend, burthen 325 tons, was launched at Buffalo on the 8th inst., to be finished for the earliest spring business.

Newark Carriages.—It is worth mentioning both as an evidence of the great demand for Newark Carriages, and the pressing business of the manufacturers that one large House in this town have been compelled, by their previous engagements, to turn away orders to the amount of $100,000, within three months! We may also mention, as a handsome compliment to the skill and taste of the manufacturers in general that a large dealer in Carriages of New Haven, himself an extensive manufacturer, declared, in this town, last week that he came to Newark for his best carriages—they being superior to those made elsewhere.—[Newark Daily Advertiser.]

American Champaign.—The vine appears to be successfully cultivated for wine in the vicinity of Baltimore. Mr. G. Fitzhugh writes to the Baltimore American that about 20,000 vines, principally the Herbemont, Lenoir, Catawba, Bland, and Isabella, all natives, have been planted within the last four years. The American also acknowledges the present of a bottle of sparkling Herbemont, made in August, 1832, and bottled in March, 1833, which "resembles champaign in color, flavor, and briskness, and is superior to much that is sold under the fascinating name of the French favorite." It is declared to be the *pure* juice of the native grape. The Burgundy and Champaign districts of France are about latitudes 47 and 48.

It is stated, that near Cumberland the Potomac passes through Strata of bituminous coal 20 feet thick, where the coal may bv thrown directly into the boats. Well may Baltimore and the cities in the District of Columbia be anxious speedily to extend the canal to these rich treasures.—[Alexandria Gazette.]

A convention of "Scientific Practitioners of Medicine in the State of Ohio," is appointed to be held at Columbus, on the 5th of January.

The River.—The recent rains have caused a considerable rise of the river; and we have no hesitation in assuring persons to the eastward, who are intersted, that they may now rely upon having a good navigable state of the river, during the remainder of this month—probably the first two weeks of December, and perhaps even longer. It is but seldom that the navigation of the Ohio is interrupted by ice before the 10th of December. In 1796, however, it closed in November, and and remained closed until February, 1797.

Georgia Legislature.—A bill to alter the Constitution, so as to change the meetings of the General Assembly from Annual to Biennial after 1835, and to elect the Judges of the Superior Courts, and the Attorney-General, and the Solicitors-General for four years, was before the Georgia Legistature and will probably pass.

U. S. Naval Lyceum.—A communication has been received from our Charge des Affairs at Constantinople, (Comodore Porter) by which it appears that he has caused to be purchased on his own account by our Consular Agent at Salonica, and has tranrmitted as a present to the United States Naval Lyceum, a very ancient and valuable specimen of Grecian Sculpture. The precious relic of ancient art is now on board the frigate United States in charge of Captain Ballard.

Interesting Ceremony.—The remains of twenty eight seamen and marines, who perished by the explosion of the United States Receiving Ship *Fulton*, in June, 1829, were disinterred and removed on Wednesday last, under the escort of a marine guard, followed by the officers of the station, and a detachment of seamen and marines, to the Naval Hospital burying ground, and deposited in a stone vault prepared for the purpose, preparatory to the erection of a monument to their memory.

Yale College.—Number of graduates, 533. Freshman Class 69, less by about 50 than last year. Number of Students from Connecticut 172, other Eastern States 67, New-York city 12, other parts of New-York 52, New-Jersey 4, Pennsylvania 7, Maryland 5, Virginia 5, North Carolina 3, South Carolina 5, Georgia 5, District of Columbia 3, Louisiana 2, Michigan Territory 2, South America 2, Mississippi, Alabama, Illinois, Kentucky, Tennessee, Ohio, West Indies, 1 each.

The Theological Department has 53; the Law School 45. The Medical School had not assembled in time to be included in the catalogue.

Brown University.—The whole number of students at this Institution, as appears by the catalogue recenly published, is 167. Seniors 32, Juniors 36, Sophomores 56, Freshmen 42.

Williams College.—From the catalogue of this Institution just published, it appears that the number of students is 120, viz., Seniors 21, Juniors 40, Sophomores 27, Freshmen 32.

The Rev. William Suddards, of Ohio, has accepted the unanimous call to the Rectorship of Grace Church, Philadelphia.

[For the N. Y. American.]

Mr. Editor: Will you oblige an old subscriber by deciding to which century the 1st January, 1800, belongs—whether to the 18th or 19th? Q.

This is a question that has been often asked, but not satisfactorily answered. If the computation be made from Zero, then the hundredth year is finished on the 31st December 99. So again, counting January 1 as the first day of a new year, December 31 would be the 365th day, and that completes a year. Hence we conclude that the 1st of January, 1800, was the first day of the 19th century.—[Ed. N. Y. Am.]

The Hero of FIVE Wars.—The Mercantile of this morning gives some interesting details respecting an old soldier who commenced his campagns under the Pretender, in the battle of Preston Pans—fought under Bradock in the old French war,—was a sergeant under Wayne in the Revolution,—was wounded in the great Indian war of 1791-2 and finally took a part in the affair of New Orleans. In each of these five wars he saw active services, was several times wounded and taken prisoner, and was once sergeant of a Forlorn Hope. The appeal appended to the following paragragh in the Mercantile cannot be made in vain!

Sergeant Andrew Wallace.—This revolutionary soldier, who is now 105 years old, and who has served his country as a soldier in her different wars for 29 years, will be during the afternoons and evenings of the present week at Peale's Museum, for the purpose of receiving the contributions of the charitable to enable him to return to his home in the interior of Pennsylvania. He first entered the army in 1754, about the commencement of the French war. In 1776 he enlisted in Pennsylvania, in the regiment commanded by "*Mad Anthony*," as Gen. Wayne was usually called, where he was appointed a Sergeant, which he continued to the end of the war. He was at the little known, bloody affair of the "Three Rivers," at the "Iron Hills," and at the battle of the Brandywine he bore the wounded Lafayette off the ground. He was at the massacre of Paoli, and is supposed now to be the only survivor of that bloody day. His brother was amongst the killed. He was at the battle of Germantown and Manmouth, and was taken prisoner whilst on a foraging party in New Jersey. After his exchange, he was Sergeant of the Forlorn Hope, at the storming of Stony Point. He was afterwards at the Cowpens, at Eutaw, and at the siege of Yorktown. After the peace, he again enlistod and was wounded by a ball in his right arm, at the battle of St. Clair's Defeat, in 1791. He was in the battle with the Indians at Russe Debouch under Gen. Wayne, and fiually was at New Orleans in 1812-13. At the age of 84 he was discharged from the service on account of disability.

To the above we need not add one word calling upon our citizens to bestow a portion of their superfluity upon this old soldier.

Naval.—The U. S. ship St. Louis, Capt. McCauley, with Com. Henly on board, bound to the West Indies, has gone to sea from Hampton Roads.

Naval.—The barque Flora, at Boston, passed on the 8th October, the United States frigate United States, Captain Ballard, from Mahon, going into Gibraltar.

The United States brig Enterprize was spoken, September 2, in latitude 2 deg. north, longitude not given, by the English sloop of war North Star, and was expected to arrive about the 15th of September at Rio Janeiro.

Quick Passage.—The packet ship Ontario, Capt. Sebor, made her passage from New York to Portsmouth, in eighteen days to an hour, and without reefing a top sail.

Packet ship Sampson.—A London paper of Oct. 17th, says:—"The large American packet ship Sampson, a regular New-York "liner," was hauled out of the St. Catherine's Dock, with upwards of two hundred and fifty steerage passengers on board, consisting of mechanics, tradesmen of small capital, agriculturists from various countries, and others, many with their families, who intended settling in the United States and British North America.—There are in addition forty respectable cabin passengers. This ship, which is bound direct for New York, takes out a greater number of emigrants than any other vessel which has left the port of London during the present year."

The new state prison erecting by the State of New Jersey, at Trenton, is expected to be completed next summer. It is estimated to cost $148,000, to complete which sum $58,000 is still wanting.

Rapid travelling.—We received from the Post-Office yesterday a letter written at Chester, Pennsylvania, Oct. 15, and *post marked* Oct. 16—having been only thirty-three days on the road. Nothing less than one of the largest extra allowances, we should think, could have procured such despatch.—[National Inteligencer.]

The elegant house of R. H. Gardiner, Esq. of Gardiner, Me. was destroyed by fire, 11th inst.

French Land Titles.—We understand that an aged French gentleman has just arrived in New York, from France, in search of lands he claims in Michigan. He holds an ancient patent from the King of France, Louis (number unknown to us,) for a tract *eighteen miles square*, in the interior of Michigan. The lands are represented to us as highly valuable, much of the tract being under improvement. The gentleman is wealthy, and intends proceeding forthwith to the investigation of his title.

There are, if we mistake not, more of these ancient royal grants extant; and to what number they may reach, or what portion or section of the old French possessions they may be found to cover, is yet problematical. Gov. Cass, we believe, recently discovered one duly recorded at Quebec, covering a part of his valuable possessions in Michigan, including the front portion of his farm.—[Buffalo Whig.]

The corner-stone of the Chapel of the Military Academy at West Point, now erecting under the authority of Congress, was laid, at the request of the Commandant and Superintendent, and of the Chaplain, with appropriate religious exercises, by the Right Rev. Benjamin T. Onderdonk, D. D., on Wednesday, 12th instant.

The Right Reverend Bishop Brownell of Connecticut, and the Rev. R. A. Henderson of Philadelphia, sailed from this port, on Monday last, in the ship Louisville, for New Orleans. The Bishop is accompanied by his wife, who seeks the restoration of her health by a winter's residence in the South, while he is engaged in the duties of his office in the States of Louisiana, Alabama, and Mississippi.—Mr. Henderson goes to take charge of the French Evangelical Church in the city of New Orleans.—We congratulate the Church, in that region, upon an event which promises to give permanency to her institutions, and to extend the influence of religion in that region.—[Churchman.]

Eastern Steamboat.—A new boat is in forwardness on the stocks at Portland, intended to supply the place of the old and popular Chancellor Livingston, on the Portland and Boston route. She is expected to be ready to take her place on the route early in the spring. She is of ample dimensions, and will be well calculated both for freight and passengers. Her length will be 160 feet, breadth 27, and depth 10, and her tonnage over 400.

Melancholly Shipwreck.—The brig George P. Stephenson, Captain Joseph Curtis, of and from Baltimore, bound to Rio Janeiro, was capsized 6th inst. at 4, P. M. lat 35 30, lon 71, in a gale, from N N W under a close reefed maintopsail. The mainmast and forotopmast was cut away, when she righted, full of water—the hatches broken open, both boats stove to pieces, and every thing washed from the decks. Capt. Curtis and his wife, two seamen and a boy, were drowned. The two officers—Mr Joseph Gavet and Joseph Richardson—and the remainder of the crew, succeeded in lashing themselves in the fore rigging. The next day the cook and one boy died; and the remainder survived on the wreck, without a drop of water, until the 14th, at 1, P. M. when we were kindly taken off by Captain Thomas R. Shapter, of the brig Cornelia, of and for New York from Rio Janeiro, where we arrived on the 21st inst. The officers and crew return their sincere thanks to Captain Shapter for his kind treatment while on board his vessel.

Tobacco.—The Ohio Tobacco crop, is said to be much less injured by the frost than was supposed; all the earlier and more valuable portion of it having been secured before the appearance of frost. The amount of the present crop will, it is estimated, exceed that of last year, which was over 10,000 hogshead. Much of it is now ready for market.

The Georgia Cotton Crop.—The accounts from Georgia respecting the Cotton Crop, are very contradictory. We yesterday were put in possession of two letters, which differ very materially in their views. One dated Macon, 7th inst. states that it is the opinion of intelligent men that the receipts there will not exceed 50,000 bales, against 71,000 last season, and giving it as the belief of the writer, that there would be a falling off of 75,000 bales in the State. The other, under date of 10th November from Augusta, alludes to the reports of the shortness of the crop, and says it is the opinion of many that it will be within 20 a 25,000 bales of last year, and that if the weather continues fine, there would be several weeks picking. We leave those acquainted with the subject, to judge which is most correct.

FOREIGN VARIETIES.

The following is a short description of the two Houses of the British Parliament before the late calamitous event had reduced them to a heap of ruins:

House of Lords.—This House was originally the old Court of Requests, in which the Masters of the Court received the petitions of the subjects to the King. The Court or Hall was fitted up in its recent manner on the occasion of the Union of Great Britain and Ireland.

The House in which the Peers carried on the business of the nation was not the whole of the old Court of Requests, for part of the north end was formed into a lobby, by which the Commons passed into the Upper House.

The throne was new on the accession of his late Majesty George IV.

The House of Lords was a very handsome, if not a splendid room. It was of an oblong description, rather smaller than that of the Commons. In the front next to Abingdon street it was decorated with pinnacles.

The celebrated tapestry of the old House of Lords, representing the defeat of the Spanish Armada, after being taken down and cleaned, was used to decorate the walls of the one which has unfortunately fallen a prey to fire. The tapestry was greatly admired. It was divided into compartments by frames of brown stained wood; each compartment containing a portion of the story. The heads which formed the border to these compartments were portraits of the several gallant officers who commanded in the English fleet on that memorable occasion.

The throne was a large armed chair, beautifully carved and richly gilt. It was ornamented with crimson velvet and embroidery. It was always kept covered except when the King came down or when there was a Commission to give assent to Bills.

Between the House of Lords and Commons was the Painted Chamber, where all the conferences between the two houses were held. The room is said to have been Edward the Confessor's bed-chamber.

The mass of buildings in the Old and New Palace-yards, which constituted the ancient Palace of the Monarchs of England, erected by Edward the Confessor, were mostly consumed by fire in the year 1512; the Court afterwards removed to Whitehall and St. James's.

House of Commons.—This house was originally a chapel built by King Stephen, and dedicated to St. Stephen; hence the name of St. Stephen's Chapel, so frequently applied to this building. It was rebuilt in 1347, by Edward III, and created by that monarch into a collegiate church, under the government of a dean and twelve secular priests. Being surrendered to Edward VI he gave it to the Commons for their sittings, and it has been applied to that use ever since.

The old House of Commons was formed within the chapel, chiefly by a floor raised above the pavement, and an inner roof, considerably below the ancient one. On the union with Ireland the house was enlarged by taking down the entire side walls, except the buttresses which supported the original roofs, and erecting others beyond, so as to give one seat in each of the recesses thus formed, by throwing back part of the walls. A gallery ran along the west end, and the north and south sides were supported by slender iron pillars, crowned with gilt Corinthian capitals. The whole house was lined with oak.

The Speaker's chair stood at some distance from the wall, towards the upper end of the room; it was slightly ornamented with guilding, having the King's arms at the top. Before the Speaker's chair, with a small interval, was a table, at which three clerks of the house sat, when parliament was sitting, their business being to take minutes of the proceedings, to read the bills and petitions, &c.

On the table the Speaker's mace was placed, unless the house was in committee. In that case it was put under the table, and the Speaker then left the chair.

Between the table and the bar was an area, in which a temporary bar was placed, where witnesses were examined. There were five rows of seats on each side and at both ends, upon which members sat. The seat on the floor on the Speaker's right hand, was called the Treasury Bench, on which the chief members of the administration sat; and the opposite seat was occupied by the leading members of the opposition. The gallery on each side was appropriated also for the members, and the front gallery for strangers—the last seat being devoted to reporters.

The chapel, as finished by Edward III., is represented as being of such beauty that antiquaries have again and again regretted it should have undergone any alteration to form it into the House of Commons. When the inner walls were unmasked at the period of the Union with Ireland, by removing the wainscot to make the alterations, a great part of the decorations remained. The interior of the walls and roof of the chapel were curiously wrought and ornamented with a profusion of gildings and paintings. It appears to have been divided into compartments of gothic shape, each having a border of small gilt roses. At the east end, including about a third of the length of the whole chapel, which part was most likely enclosed for the altar, the entire walls and roof were covered with gilding and paintings, and presented in the mutilated state in which they were seen during the alterations above alluded to a superbe and beautiful remnant of the fine arts as they existed in the reign of Edward III. This, however, as respected the paintings, could not be very advanced, for according to the authority of Lord Oxford, no mean writer upon the subject of the fine arts, in his highly entertaining work "Anecdotes of Painting," the arts had made but little progress in this country at that remote period. The gilding was remarkably solid and highly burnished, and the color of the paintings vivid, both being nearly as fresh as when they were executed. One of the paintings is represented as possessing merit even in the composition; the subject was, "the Adoration of the Shepherds." The Virgin was not devoid of beauty or dignity.

The west front of the chapel was to be seen until the destruction of Thursday night, and it had a fine Gothic window.

Beneath the house, in passages or apartments appropriated to various uses, were to be seen considerable remains, in great perfection, of an under chapel of curious workmanship, and the entire side of a cloister, the roof being of great beauty. A small court of the palace was not disturbed at the Union; and it, with other buildings, formed part of the dwelling of the Speaker. Between the house and the Thames the Speaker's garden is situated.—Within the house were a great many rooms for the officers of state, clerks, &c., besides numerous committee rooms. In the year 1816, the floor was newly laid.

The Libraries.—The libraries, especially that of the House of Lords, were exceedingly extensive, consisting not only of books connected with legislation and public records, but upon general literature. Many of the books were superbly bound. During the session peers frequently came to read in the library in a morning. It was only in the course of last session or the session before, when Lord Ellenborough, having occasion to refer to a volume in the library during a discussion, passed an eulogium on the excellent collection of books which their lordships possessed.

Edinburgh Scientific Meeting.—A grand meeting of delegates from the schoolmasters and professors of Scotland is held annually in the great hall of the High School at Edinburgh. The object of this assembly is to examine the accounts of the society for making provision for retired members of the scholastic profession. The number of *savans* and foreigners from all parts of Great Britain and Europe, who came to attend the scientific congress and the dinner given to Lord Grey, were very numerous.—After the business of the day had been gone throgh, a considerable number of the members dined together at the Waterloo Tavern. Among the toasts given was one to the University of France, and another to M. Guizot, Minister of Public Instruction. These toasts were highly applauded. M. Mallac, one of the directors of the *Revue du Progrès Social*, who had been deputed by M. Guizot to proceed to Edinburgh to study and report upon the organization of the Scotch schools, returned thanks, and dwelt upon the immense progress that had been made in France, as to education, since the revolution of July: he terminated by proposing the following toast:—"To the prosperity of the primary schools of Scotland." Thus the alliance between England and France becomes daily more national. It is not only recorded in treaties brought about by deplomacy, but it has penetrated into the hearts of the people, and is manifested in the acts of practical life.—[Journal des Debats.]

King George's Sound.—The last account from New South Wales furnish some interesting intelligence respecting the new settlement at King George's Sound. The town of the colony, which is called Albany, is situated on the N. E. side of Princess Royal Harbour, a fine basin of about twelve miles in circumference, and three or four miles across. It is, however, very shoal, excepting in a small place in the site of the town, where a few ships, not drawing more than sixteen or eighteen feet of water, may ride in perfect safety. The entrance into the harbor is very narrow, and precludes the effect of all high and stormy winds. The allotments of land are given gratis in the town, as well as the beach allotments and the suburban allotments of six acres for country houses. All other lands may be purchased for five shillings per acre. Some of the land is very rich, and, with little labor, would prove of the finest cultivation. Many sloping valleys of rich pasture had been discovered, enjoying a fine, mild, and agreeable climate. The good land on the hills was very thickly overgrown with trees. Sheep and cattle thrive exceedingly well on the wild herbage of the country. The Devon and Durham heifer, and the pure Merino sheep landed in the settlement in September last, were in the finest possible condition. All vegetables, whether imported from England or elsewhere, throve with the greatest luxuriance. Olives, grapes, gooseberries, currants, roses, orange trees, China tea plants, mangoes, guavas, &c. were growing well. The entire population of the settlement, exclusive of the military, was eighty persons. The most friendly intercourse had been established with the aborigines, who appeared to be of a milder character than in the other parts of New Holland.—They were much attached to the settlers, and six or eight were constantly employed in working in the governor's garden. The native pigeon and the quail were numerous. The colony of the society of Friends had taken 80,000 acres on the bank of the French river, at the head of Oyster Harber.

Conch Divers of the Bahamas.—In December 1821, one of his Majesty's ships, in going into the harbour of New Providence, struck on a bank, and rubbed off a sheet or two of her copper. The following morning, one of the divers being sent for, and supplied with hammer, nails, and sheet of copper, sunk himself to the keel, and after two or three breathings at the surface of the water, made good the defects! He was afterward required by the commanding officer to bend a hawser into the chain-cable near the anchor, as it lay at the bottom in nearly four fathoms water. This he accomplished with much ease, and a seaman-like bend it proved on the anchor being hove up. These divers, who are black men, and generally natives of the outer island, are nearly six feet in hight, with broad shoulders, and so accustomed to diving for conchs from their infancy, in from two to ten fathoms water, that they have habituated themselves to continue under water for as long a time, perhaps, as the pearl divers of India. They often take with them a hammer, and on finding a a conch will break its shell, take out the fish, and prepair it for dressing before they rise; they will also take a bottle of any drinkable liquid, with the cork wired, and sink to the bottom in three or four fathoms, and, with the corkscrew, draw the cork, drink its contents, and rise with the empty bottle! Porter is always the beverage they solicit on these occasions.—[Nautical Magazine.]

Persian Manufactures.—Persia during the days of her prosperity, was greatly distinguished as a manufacturing country. Her fabrics, suited to the oriental taste, have supported not only the ostentatious magnificence of her Court and great men, but those of Turkey, Tartary, and even those of Northern Africa. The women of the wandering tribes weave from the wool of the sheep those carpets which we call *Turkey*, from the place of their immediate importation. They form throughout the East the most important branch of ornamental furniture. The carpets manufactured in Khorassan possess the highest reputation. The next staple consists of silk fabrics, rich and ornimented, particularly brocade and embroidery. Sometimes the tissue is entirely silk, sometimes mixed with cotton and wool. Under the Ahassyde dynasty the precincts of the Court contained great works of tapestry composed with silk and wool embellished with gold; but this art, though not entirely lost, languishes for want of encouragement. Arms, particularly sarbes of a superior quality, and richly embellished with gold, silver and precious stones, are prepared on a great scale to meet a sure demand; and in this branch no decline has been observed. The manuacture of earthenware is very extensive throughout Persia.—and some of its products almost rival the porcelain of China. These, with shawls made from the goats' wool, leather paper, and jewellery, complete the list of her principal manufactures.

Count Mathuschevitz's stud have sold for 2,500 guineas.

The following epitaph has just been placed on the tomb of Gaspard Hauser, buried at Anspach:—*Hic jacet Gaspardus Hauser, enigma sui temporis, Ignota nativitas, occulta mors*, 1833.—Here lies Gaspard Hauser, the enigma of his age. His nativity unknown; his death concealed.

Halley's Comet.—Seeing in your paper an extract from a New York paper, stating th t Halley's comet was visible in the constellation Taurus, I beg leave to state that that comet will not be visible to this. previously to August 1835, and that its nearest approach to the earth will take place on the 6th of October, 1835, when it will be nearly vertical in this latitude, and will be visible in the evening, in the constellation of the Great Bear, never setting for several days.—[Correspondent of a Dublin paper.]

Number of Places of Worship.—It appears from a Parliamentary return just published, that in 188 parishes of England, each containing a population of a thousand persons, or upwards, there are 2523 churches or chapels connected with the Establishment, and 3438 Dissenting places of worship. The churches have sitting rooms for 1,856,108 persons, but there is no statement as to the capabilities of the chapels. In the dioces of Chester, in which this town is situated, there are in the 257 parishes with 1000 inhabitants or upwards, 351 places of worship belonging to the Establishment, and 439 belonging to the Dissenters. The churches will seat 220,542 persons.

It is stated in a late publication in England on Temperance, that the "United Kingdom pays annually fifty million pounds sterling for spirits, wine and malt liquor, and consumes, in the same period, as much of these fiery liquids as would make a river of three feet deep, sixty feet wide, and eighty-four and a half miles long."

Prince Esterhazy, it is stated, will not return to London; his estates, it is said, produce to him a revenue of 2,000,000 florins, or about £230,000 sterling; and his debts, which have been chiefly contracted by his father, amount to 1,800,000 florins.—His fine estates are well known, and his sheep are numbered at 3,000,000; and these supply annually from 40,000 to 50,000 hundred weight of wool.

Count Mazzinghi.—This eminent composer has lately been recognized as the rightful heir to a title which had been considered lost for upwards of forty years. Mr. Mazzinghi repaired form London to Florence, and made good his claim, when the title of a Tuscan Count was conferred on him. From Florence he went to Rome, and was received by his Holiness the Pope most graciously. Mr. Mazzinghi has been a member of the Royal Society of Musicians 47 years, and, notwithstanding his newly-acquired honors, he has expressed a wish that his name should remain on the list as heretofore, among so man old friends and associates, whom he respects; but, as Count Mazinghi, he begs to present the society with a donation of 25*l.* Mr. Mazzinghi married a daughter of the late Mr. Hodges, the eminent distiller, with whom he received a handsome fortune, which will fully enable him to support his title.

The musical world has, within the space of a few months, lost two of its brightest ornaments—Choron and Boildieu. The former had acquired, by long study, a knowledge of the science of music which even his enemies admitted to be unprecedented in depth and correctness; the latter, gifted by nature with the most extraordinary musical talents, has left behind him a great name, and added much to the deservedly high musical reputation of France. For some months he had been confined to his room, and after long and painful sufferings he expired at his house at Jarey on the 10th of the last month, surrounded by sorrowing relations and friends. It is reported that a monument will be raised to his memory by subscription.

Such is the demand for the popular perfume eau de Cologne, that there are said to be not less than forty "Jean-Marie Farinas" who deluge Europe with it in its genuine and spurious state.

Wooden Rustic Work for Gardens.—The advantages of wooden rustic work is that it can be adapted to a great variety of purposes. Thus very beautiful and even architectural temples may be formed of unbarked wood. Ornamental doors, every description of garden seats, and flower baskets and vases of very elegant forms, may be composed of the same material. Shady walks also, having the pleasing gloom and enriched effect of a Gothic cloister, may be made of wooden rustic work. I allude more particularly to what I call wood mosaic, which is, I believe, rather a modern invention. It is formed of split sticks of various lengths and sizes, and having bark of different colors. The pieces are nailed to any flat surface of wood, and very beautiful and elaborate pattern may be produced by arranging the pieces according to their sizes and the various colors of the work. Garden seats and vases of almost any shape may be covered with this kind of mosaic work, but as it is not durable when exposed to the weather, it is most suitable for the inside of summer houses and garden temples. In such situations the richest spicimens might be introduced, and if varnished over they would last for a number of years. There are some handsome and rather costly specimens of this kind of ornament in the flower garden of Bagshot Park.—[Gardner's Mag.]

Method of Preserving Flowers with their Natural Colors.—A method has since been mentioned to me, by which the colors of the flowers of plants are well preserved. The process was this:—the paper being first heated before the fire, or in an oven, the plant recently gathered is placed between two hot sheets, and pressed. It is requisite, however, that the paper, in the same heated state, be renewed at intervals, on account of the expressed juices from the stalks and leaves fermenting, which might otherwise injure the plants. There is also a method of preserving plants in flower, by which their natural form, as well as colors, can be preserved. It consists in placing the plant in a jar, and pouring fine sand upon it, until the whole plant is covered: it is then to be placed, still kept in the jar, into an oven; after which, being taken out, and the sand removed, the plant is found preserved both in its form and color.—[Bennett's Wanderings in New South Wales.]

The following beautiful stanzas, to the memory of Sir John Stevenson, are extracted from the concluding volume of Moore's Irish Melodies.

Silence is in our festal halls,—
O Son of Song! thy course is o'er;
In vain on thee sad Erin calls,
Her Minstrel's voice responds no more—
All silent as the Æolian shell
Sleeps at the close of some bright day,
When the sweet breeze, that wak'd its swell
At sunny morn, hath died away.

Yet at our feasts, thy Spirit long,
Awak'd by music's spell, shall rise,
For name so link'd with deathless song
Partakes its charm and never dies;
And ev'n within the holy fane,
When music wafts the soul to heaven,
One thought to him, whose earliest strain
Was echoed there, shall long be given.

But where is now the cheerful day,
The social night, when, by thy side,
He who now weaves this parting lay,
His skilless voice with thine allied,
And sung those songs whose every tone,
When bard and minstrel long have past
Shall still, in sweetness all their own,
Embalm'd by fame, undying last.

Yes, Erin, thine alone the fame,—
Or, if thy bard have shar'd the crown,
From thee the borrow'd glo / came,
And at thy feet is now laid down.
Enough, if Freedom still inspire
His latest song, and still there be,
As evening closes round his lyre,
One ray upon its chords from thee.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.
J31 6t

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines. and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 9d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, } *Flat Bars* in
200 do. 1½ do. ¾ do. } lengths of 14 to 16
40 do. 1¼ do. ¾ do. } feet counter sunk
800 do. 2 do. ¾ do. } holes, ends cut at
800 do. 2½ do. ¾ do. } an angle of 45 degrees with splicing plates, nails to suit.
soon expected.

2250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2¼, 2⅜, 2½, 3, 3¼, 3½, and 3⅝ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71mecowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most complesely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.
German. and Norris. Railroad,
m1 1y

OFFICIAL

DEPARTMENT OF STATE, }
Washington, November 21st, 1834. }

Information has been received from the United States Consulate at Guadaloupe, under date of the 12th ultimo, that a Proclamation has been issued by the Lieutenant Governor of the Island of Dominica, authorizing the importation, in that Island, in vessels of all nations, duty and tonnage free, of the following articles, the growth, produce, or manufacture of any foreign country whatever, that is to say—flour, shingles of all descriptions, staves of all descriptions, pitch white, and yellow pine lumber, and lumber of all other kinds, wood hoops, beef, pork, and every species of salt, dried and pickled fish; such importation to continue for the period of six months, from the 27th of October, 1834.

EXCHANGE.—Believing that the Merchants, Traders, and others of this city may be benefitted by a statement of the Rates of Exchange, similar to the plan adopted by Boston Banks, we have obtained a list of rates as at present charged by the PHENIX BANK of this city.

The arrangements of the Phenix Bank for Collecting Bills and Notes, extend to every State and Territory of the Union, we have found it necessary therefore to condense our table by inserting the maximum and minimum rates on each State. The variations arising from the greater or less difficulty of collecting on some of the towns and places of the interior and off the direct mail routs.

Toronto, Upper Canada 2

Maine	½a1	Illinois	0 a0
New Hampshire	½a1	Missouri	1 a2
Vermont	½a1	Michigan	1½a1½
Massachusetts	0a1	Virginia	½a1
Rhode Island	0a0	Kentucky	1 a1½
Connecticut	0a0	North Carolina	1 a1½
New York	0a1	South Carolina	½a1
Pennsylvania	0a1½	Tennessee	1 a1½
New Jersey	0a0	Georgia	½a1
Delaware	0a0	Alabama	1 a1½
Maryland	0a0	Mississippi	1 a1½
District of Columbia	½a1	Louisiana	1 a1½
Ohio	½a1½	Florida	0 a0
Indiana	0a0		

The inner column shows the rate for the greater portion of places in a State—the outer, for more inaccessible points.

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by

a12 tf D. K. MINOR & J. E. CHALLIS.

MECHANICS MAGAZINE.

THE NUMBER FOR OCTOBER 31, will be ready for delivery to Subscribers on Monday next. It contains numerous articles, and a concise account of the FAIR of the AMERICAN INSTITUTE held at NIBLOS' GARDENS, illustrated with numerous engravings.

☞ MECHANICS' and OTHERS who feel interested in endeavoring to abolish the abominable "STATE PRISON MONOPOLY" are requested to forward to the Editor such facts as come within their knowledge, and they will be published if authenticated.

The Mechanics' Magazine and Register of Inventions and Improvements is published by the Proprietors, D. K. MINOR & J. E. CHALLIS, at No. 35 Wall-street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, *in advance*.—JOHN KNIGHT, (formerly proprietor of the London Mechanics' Magazine,) Editor.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept.13-1 y

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 16, 1833. A29 tf RM&F

LONG ISLAND RAILROAD COMPANY.

NOTICE IS HEREBY GIVEN, That the undersigned Commissioners, appointed by an act of the Legislature of the State of New-York, passed April 24, 1834, will receive subscriptions to the capital stock of the Long Island Railroad Company, being One Million Five Hundred Thousand Dollars, divided into shares of fifty dollars each, agreeably to the charter of said Company, on the 15th, 16th, and 17th days of December next, from nine in the morning to three in the afternoon of each day, at the following places, viz.—At the Dry Dock Bank, No. 333 Pearl-street, in the city of New York—at the Apprentices' Library in the city of Brooklyn, county of Kings—at the Court House, in and for the county of Queens—at the Inn of William Griffing, in the town of River Head, county of Suffolk—at the House of Thomas Hallock, in Smithtown, in said county of Suffolk.

Subscribers are required by the Charter of the Company to pay to the Commissioners at the time of subscribing five dollars on each share.

Copies of the Charter can be had upon application at the Dry Dock Bank, 333 Pearl-street, New-York.

Samuel Hicks	Benjamin Strong
John Lorimer Graham	Joseph Moser
Edwin Hicks	Edmund Frost
Singleton Mitchell	Nicholas Wyckoff
William F. Blydenburgh	James H. Weeks
Joseph H. Goldsmith	Valentine Hicks.

13nov tDec. 18

UTICA AND SCHENECTADY RAILROAD COMPANY

Call for Second Instalment on Stock.

THE Stockholders in the Utica and Schenectady Railroad Company are requested to pay on or before the twentieth day of December next, the sum of Three Dollars on each Share of Stock in the Company held by them respectively under the penalty (provided by law in case of non-payment) of the forfeiture of all previous payments made thereon.

Stockholders residing in the city of New York, or within said State and south of the counties of Columbia, Greene and Delaware, are requested to make said payments to the Cashier of the Phenix Bank, at the said Bank in the city of New York; and all other Stockholders in said Company are requested to make said payments to the Treasurer of said Company at the Albany City Bank or at the Commercial Bank, in the city of Albany; but any Stockholder residing west of the counties of Albany, Schenectady or Saratoga may make such payments by depositing the same to the credit of the said Treasurer in the Ontario Branch Bank, in the city of Utica, or in the Herkimer County Bank, at Little Falls, or in the Montgomery County Bank, at Johnstown, provided a certificate of such deposite (with the name of the Stockholder by or for whom such deposite is made) be forwarded to said Treasurer, so as to be received by him on or before the 25th day of December next.

Albany, November 12, 1834. By order.

GIDEON HAWLEY,
Treasurer of the Utica and Schenectady
Railroad Company.

noy17d&Ctdec20

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, }
January 29, 1833. }

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.60—Semi-Weekly, at $4.00 in advance.

The American Railroad Journal, Weekly, at $3.00 per annum.

The Mechanics' Magazine, two volumes a year, at $3.00 per annum.

The Quarterly Journal of Agriculture and Mechanics, at $5.00 per annum, or $1.25 per number.

The Family Magazine, 416 pages a year, at $1.50 in advance.

The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at $1.00 in advance, now in the 5th volume, bound volumes $1.25

The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

n6v6 Ctf

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post-Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—NEW YORK FARMER and AMERICAN GARDENER'S MAGAZINE; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*; *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany*. tf

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examin these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J25 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

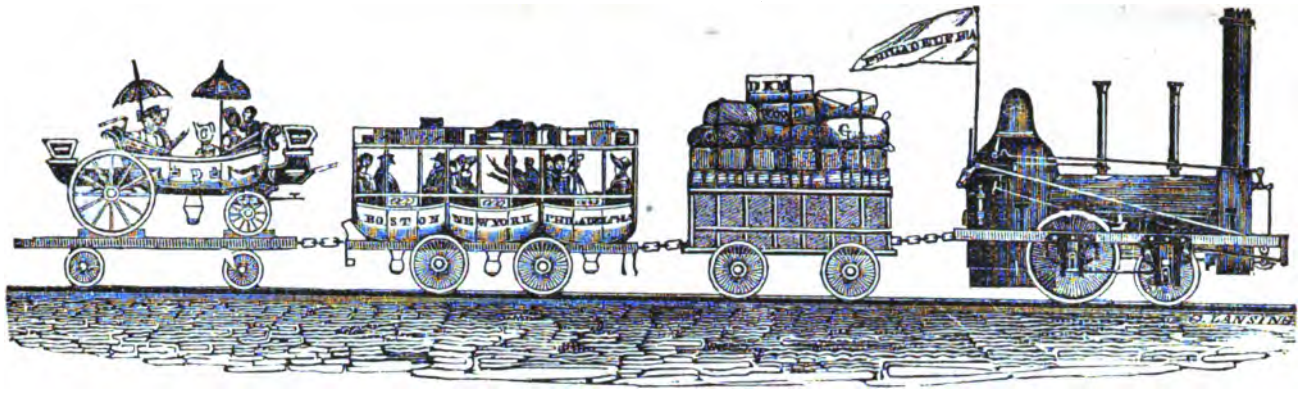
These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m26



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, DECEMBER 6, 1834. [VOLUME III.—No. 48.

☞ For Contents, see last page.

Railroad Convention.—After the Journal was on the press, and a part of it worked off, we received the annexed circular calling a convention at Bath, Steuben county, for the purpose of deliberating upon and adopting measures in relation to the New-York and Erie Railroad. We have only time and space now to say, that we shall refer more particularly to it in our next—and, in the mean time, use our best exertions to promote the object in view.

At a meeting of the Inhabitants of the county of Steuben, friendly to the proposed Railroad through the Southern tier of Counties, held at the Court-house in Bath, on Tuesday, the 25th of November, 1834, Henry A. Townsend was appointed Chairman, and John Cooper, Jr., Secretary.

On motion, resolved,—That the different Counties of the State of New-York, friendly to the construction of the New-York and Erie Railroad, be invited to meet in convention, at the Court-house, in the village of Bath, on Wednesday, the 17th day of December, 1834, at 10 o'clock in the forenoon, for the purpose of adopting suitable measures for promoting this great and important work.

Resolved,—That a Committee of three be appointed to correspond with the friends of the Railroad throughout the State, consisting of Wm. S. Hubbell, Wm. W. M'Cay, and Henry W. Rogers, Esquires.

On motion, the following persons were selected as delegates, to represent this county in said convention :

Wm. W. M'Cay, Wm. Kernan, Henry A. Townsend, Ira C. Clark, John Cooper, Jr., Joseph Loghry, Ralph Babcock, Wm. Woods, Wm. Goff, Wm. S. Hubbell, Ira Davenport, John R. Gansevoort, John E Evans, Paul C. Cook, Levi Davis, Henry S. Williams, John M'Burney, Wm. Steele, Henry W. Rogers, John Magee, Lemuel B. Searls, John Knox, George C. Edwards, Henry Switzer, Lazarus Hammond, Grattan H. Wheeler, James Manderson.

The Members of the Board of Supervisors of said County of Steuben were also added to the above delegation.

Resolved,—That the proceedings of this meeting be signed by the Chairman and Secretary, and published in the papers of the county.

Henry A. Townsend, Chairman.
John Cooper, Jr. Secretary.

New-York and Erie Railroad.—By the annexed extract from the proceedings of the Board of Assistants, on Monday last, it will be seen that our citizens begin to move in favor of this important work. It could hardly be otherwise; and it would be a libel upon the intelligence and liberality of the business men of this city to suppose that they would withhold, from such a work, a favorable expression of opinion—or all proper aid, when the proper time shall arrive for its construction. That time, as we believe, has arrived. Additional channels of communication are needed; and, as increased speed is required, as well as an extension of the period for the transaction of business, to keep pace with neighboring States, it follows, almost of course, that this Railroad should be prosecuted with all possible expedition.

Whereas the immense augmentation which has been experienced in the extent, wealth and prosperity of the city of New York, since the completion of the Canals of this State, signally demonstrates the value and necessity of artificial channels of commercial communication connecting the metropolis with the populous and fertile regions of the interior :

And whereas several rival works leading into the State of Ohio, from ports on the Atlantic sea-board south of this city, are now constructing and are rapidly advancing to completion, under the direction of various companies incorporated and powerfully patronised by the States of Pennsylvania, Maryland, and Virginia, seeking to divert from the city of New York the extensive and lucrative commerce which it has heretofore enjoyed with the rich and rapidly increasing States and Territories north of the Ohio River, avowedly relying for success upon the greater severity of climate and more northerly latitude of the State of New York closing the navigation of its canals during a large portion of the year :

And whereas it has become vitally important to the commerce of this city to obviate the difficulties and disadvantages to which it is thus subjected, which object can only be attained by opening additional channels of trade and intercourse by means of Railroads leading directly from the Bay of New York to the navigable Lakes and Rivers of the West, and which shall be available for commercial purposes at all seasons of the year :

And whereas the Legislature at its last session directed the route of a Railroad to be surveyed under the direction of the Executive, through the Southern Counties of the State from the Hudson River, near the city of New York, to Lake Erie, for the purpose of ascertaining whether the public interest would be promoted by a subscription on the part of the State, to a portion of the capital stock of the New York and Erie Railroad Company, incorporated in the year 1832, for the purpose of constructing such road, by which subscription the commonwealth at large might participate in the burthens and benefits of that undertaking,—or in what other mode the general objects sought to be accomplished by that act of incorporation might properly be encouraged by the public authorities :

And whereas by means of such survey it has been satisfactorily ascertained, that if the State shall co-operate and participate in the enterprize, the whole of the road can be completed within four years from the first day of May, 1835, and a communication thereby provided by which passengers and merchandize may be cheaply, rapidly and regularly transported, *at all seasons of the year, in less than forty hours, from the city of New York to the southern shore of Lake Erie*, connecting the line of the route with the Alleghany River, and thus communicating directly with the valley of the Ohio :

And whereas the inhabitants of this city are deeply interested in the prosecution and speedy accomplishment of this most important undertaking, tending, as it inevitably must, to attract and secure forever to this port the vast and expanding trade of the most fertile, populous and valuable portion of the continent, thereby augmenting the commerce, prosperity and wealth of this emporium to an incalculable extent :

Therefore Resolved, (if the Board of Aldermen concur herewith,) that it be referred to a joint Committee of three members from each Board, to report resolutions signifying the sense which the Common Council of this city entertain of the necessity, importance and value of the proposed work, and to inquire and report what measures, if any, the city may properly adopt to promote and secure its speedy execution.

We insert the following communication with much pleasure, as it refers to a subject which has been frequently treated of in this Journal. It will, we hope, elicit further information from American engineers, and we again call upon them to furnish us with the result of their reflections and investigations. The request of the writer shall be attended to, and we trust he will favor us with further communications.

On Railroad Undulations. By John Thomson, Civil Engineer, Nashville, Tennessee. To the Editor of the American Railroad Journal.

Experiments have been made on the Liverpool and Manchester Railroad, by Mr. Badnall and others, for the purpose of showing the advantages of undulations on railroads. These experiments, and the results attempted to be deduced from them, are well known to engineers. The principles which Mr. Badnall attempts to deduce from these experiments have been considered visionary by many practical and scientific men. The question has attracted greater attention in England than in this country. The system has found its supporters and its opponents, who not unfrequently have employed ridicule and sarcasm instead of cool and rational argument.

It must be confessed, that the experiments above alluded to are not satisfactory. They seem to prove too much; as we ought to conclude from many of those experiments, that a car passing over an undulating road would acquire an additional velocity at every undulation, and would thus be moved by a kind of accelerating force as long as the undulations continued. The results of the experiments also are not sufficiently uniform,

and indicate something defective in the mode of making the experiments. We may add also, that Mr. Badnall has not been successful in his theoretical peductions. We may quote for example the following:

"Let P be the pressure or weight of a given body resting on a horizontal plane, and let S be the quantity taken off that pressure, (or let it be the diminution of pressure,) when the body is placed on an inclined plane, and let a be the angle of inclination with the horizon; we then have in *all cases*

S : P : : height : base.

But height : base : : tang. a : 1

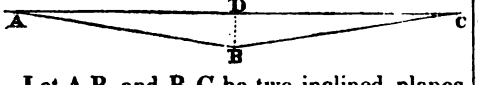
therefore S : P : : tang. a : 1

consequently S = P tang. a."

That this conclusion is erroneous may be shown by supposing a body of a given weight to be supported on an inclination of 45 deg. In that case we have tang. $a = 1$, and consequently the above equation becomes S = P, that is, the diminution of pressure is equal to the whole weight of the body, and therefore the body rests on the plane without pressure upon it, which is manifestly an error.

But notwithstanding, there is enough in the experiments of Mr. Badnall, and in the nature of the subject generally, to invite the attention of engineers. That a body may be passed from one point to another, in the same horizontal plane, along a descending and an ascending path, in a shorter time than another body, moving in a straight horizontal line, and impelled at first by the same horizontal force, is true in theory, and no mathematician would controvert a principle so well known in mechanics. But whether the same will hold in practice, where the resistance of friction and of the atmosphere, &c. are to be taken into consideration, remains a question.

In further remarking on this subject, we shall adopt particular examples, which will perhaps answer the purpose of the present investigation better than a more general method.



Let A B and B C be two inclined planes, meeting at the point B, and suppose the length of each to be 954 feet, the height B D 9 feet, the descent will therefore be 1 in 106, or 50 feet in the mile nearly. The distances along the inclined planes C B A, and along the straight line C D A, will be nearly the same, and equal to 1908 feet. Put g = force of gravity, f = any other accelerating force, t = time, v = velocity, and s = space.

Suppose a body at C to pass from C to B by the force of gravity, without resistance of an kind from friction, &c. the time of descent will be $t = \sqrt{\frac{2s}{f}} = 79{\cdot}2$ seconds, and the time in passing along the two planes C B, B A, will consequently be 158·4 seconds, supposing the angle at B slightly rounded. It is evident that the body at C may be removed in this way from the point C to A, without the application of any other force than that of gravity. Let us now suppose the body to be removed from C to A along the straight line C D A. To do this, either an impulsive or an accelerating force will be necessary, the force of gravity, of course, not acting in this direction. To find the amount of accelerating force that will move the body from C to A along the straight line, in the same time that it passes along the inclined planes, we have $f = \frac{2s}{t^2} = {\cdot}152$.

If we assume the weight to be removed 100 tons, the above force, compared with the force of gravity, will be expressed by 1057 pounds. This will be the accelerating force necessary to overcome the vis inertiæ of the above weight, so as to move it in a straight line from C to A, in the same time that it would pass by the force of gravity along the inclined planes. If we assume the resistance of friction of rail cars equal to the 240th part of the weight, the friction from a weight of 100 tons will be 933 lbs. Hence it is evident, that to overcome for the above space and time the vis inertiæ of a train of cars weighing in all 100 tons, it will require a greater force than that necessary to overcome the resistance of friction.

Let us now assume a case in practice: suppose two trains of cars to pass by locomotive power from C to A, one train along the inclined planes, the other along the horizontal plane A D C. Here a variety of accelerating and resisting forces are to be taken into consideration, and compared together, as they operate on each roadway. The resistance of friction may be considered the same on the level and on the inclined planes, since the pressure on an inclined plane, and consequently the friction, is as the cosine of inclination; and as the angle of inclination in the present case is very small, its cosine approaches very nearly to unity. The resistance of the atmosphere may also be considered nearly equal in both cases; at least, in practice, the difference is probably of little consequence. In regard to the resistance of inertia, the inclined plane has the advantage of the horizontal; as, on the former, it may be considered as overcome by the force of gravity. There is one resisting force operating on the inclined planes, which does not exist on the horizontal. It results from a change of direction from C B to B A; but as we have supposed the angle at B to be roundod, the only resistance will arise from an increase of pressure, and consequently of friction, in passing over the curve at B. Let us suppose the whole line C B A to be a circular curve, D B and D C the co-ordinates which are given. The radius of curvature will then be 50566 feet. And supposing an average velocity of 20 miles per hour, we have $f = \frac{v^2}{R} = {\cdot}017$. If the weight moved be 100 tons, the above force, compared with the force of gravitv, will be expressed by 118 lbs. This will be so much *additional weight* in passing the curve, and consequently the *additional* resistance of friction will be about one half pound. It is evident, therefore, that this resistance may also be neglected in comparing the advantages and disadvantages of the inclined and horizontal planes.

Let us now suppose the train of cars that move along the inclined planes to be propelled by a force of steam just sufficient to overcome the resistance of friction, atmosphere, &c. In that case we may suppose the whole mass to move (as in theory) without resistance, and by the force of gravity alone. The train would therefore move from C to A in 158 seconds, as above shown. But the same force of steam would not be sufficient to move the train along the horizontal plane, as the resistance of inertia for a given space and time was shown to be greater than that of friction. A slow progressive motion might be given to the cars by a small increase of the force of steam, but it would require more than double the force necessary to overcome friction, in order to move the train along C D A, in the same time with the train moving along C B A. It should also be observed, that the velocity acquired in passing along C D A in 158 seconds, is nearly 16½ miles per hour, when the velocity of a locomotive may generally be considered as nearly uniform. It is evident, therefore, that for the distance and inclination here supposed, and for *initial* movements, one concave undulation, (if it may be so called,) has the advantage of a straight horizontal surface.

Again, let us suppose a case in which a number of undulations may be taken into consideration. Let two bodies be supposed to move with equal and uniform velocities alone the horizontal plane from E to C, one then passing along the inclined planes C B, BA, AK, the other passing along the horizontal line C G, the bodies moving without resistance from friction, &c. Assume the length and inclination of the planes the same as before, and let the initial uniform velocity from E to C be taken for example, $v = 6$, or 4 miles per hour nearly. Then having f and s given, to find the time of passing down the inclined plane C B, we have $\frac{1}{2} f t^2 + v t = s$, from which $t = 61{\cdot}9$ seconds.

Hence the time in which the body passes along the two inclined planes C B A, will be 123·8 seconds. But the body moving along the horizontal plane C A, with the uniform velocity above given, will pass from C to A in 318 seconds, almost three times greater than the time of passage on the inclined planes. Now suppose the angle at A to be rounded, the body which moves along the inclined planes will pass the point A with the same original velocity with which it first started at E, because nothing has occurred to destroy that velocity. Hence it follows, that the body will pass the second equal concave undulation A K G in the same time it passed the first, and so on for succeeding undulations. It appears also that the *mean* velocity along the inclined planes, of the length and height already given, is nearly three times greater than that along the horizontal plane, the original impulsive force having acted *equally* on both bodies. It follows also that the mean velocity along the inclined planes, for a given number of undulations, is a constant quantity, and not an accelerated velocity. It is evident, also, that if the inclined planes had been reversed, that is, if C B had been an ascending plane from C, instead of a descending one, the motion of the body, moving along the inclined planes, would have been retarded in the same ratio that we have seen it accelerated; and hence the advantage of increased velocity is only gained by having the inclined planes below the general horizontal plane.

The above being true in *theory*, the question now presents itself—will the same principles hold in practice? It would seem, on

a general view of the subject, that the action of the impelling and resisting forces, as they occur in practice, could scarcely be so *unequal* as entirely to destroy the advantages of inclined planes of moderate length and height. If models may be considered as giving any thing like correct ideas of practical operations, (and it must be confessed they are not always to be relied on,) any one may satisfy himself of the general truth of increased velocity, as above stated, by simply propelling two small rollers, of equal dimensions, with the same impulsive force, one to pass along a horizontal plane, the other along an undulating surface, which may easily be prepared for the purpose.

It is not at all inconsistent with the principles of Dynamics, but in perfect accordance with them, that two bodies may be impelled horizontally with the same motive force, and yet one pass between two given points, in the same horizontal plane, in less time than the other body moving in a straight line. It is true, that a straight line between two points given in space is the line of quickest passage, when a single given force acts alone. But in the present question, two principal forces are always supposed to act —the motive force and the force of gravity.

In practice, the action of the force of steam is not always regular. When the piston has acquired a very rapid motion, the actual pressure of the steam in the cylinder becomes less, not so much from a difference of pressure in the cylinder and boiler, as from the fact, that steam is not generated with sufficient rapidity to keep up the usual pressure in the boiler. Hence it is, that when a locomotive passes down an inclined plane, the actual motive force of the steam will be lessened, when a very rapid velocity has been acquired near the foot of the plane. But it is altogether probable that, on planes varying from 800 to 1200 feet in length, and of an inclination of about 50 ft. in the mile, the average force of steam would be abundantly sufficient to pass a loaded train over a concave undulation, in less time than it would pass the same distance in a horizontal line, if we suppose the force of steam sufficient to give the train a velocity of 10 or 12 miles per hour on a *level* road.

But, in all cases in practice, care should be taken to adjust the length and height of undulations, so that the velocity acquired at the foot of the planes should not be greater than what might be deemed safer unde all circumstances.

Upon the whole, *gentle* undulations, where the grouud will permit, seem to be well calculated for steam or horse power. Much may be saved in the expense of grading, and water will always be prevented from lodging on the roadway.

In locating the planes for undulations, care should be taken so to adjust them, that a car, in passing over them, may first descend, and then ascend to nearly its former level. The nature of the ground in all places frequently permits this; for instance, in crossing a ravine, or small creek bottom, where the length of the planes may be from 100 to 300 yards. When it is necessary to extend the length of the planes to half a mile, or more, it is evident that the ascending and descending grades should be so adjusted, that the force of steam alone, and not momentum, may be depended upon, for passing the load up the ascending plane.

Fifth Annual Report of the Superintendent of Graduation, Masonry, and Construction of the Baltimore and Ohio Rail Road.

Office of the Superintendent of the Graduation, Masonry and Constructionof the Baltimore and Ohio Rail Road. 1st. Oct. 1834.

To Philip E. Thomas, President, &c.

Sir—As a full and detailed report in relation to the work placed under my superintendence will necessarily be made, as soon as it shall have been completed, and as the entire road to Harper's ferry is now almost finished, as well as the graduation and masonry of that part of the Washington road that has been authorised to be put under contract, I consider it only necessary in this report to give you a general view of the condition of the work at the present time, and to state the periods when the same will be finishsd.

The entire graduation and masonry of the Baltimore and Ohio Rail Road, as far as to Harper's ferry, is completed, except that it may yet be necessary to remove a few points of projecting rocks on the north side of the road, between the Point of Rocks and the ferry.

The materials for the construction of the rail tracks on this road have been provided, and the greater portion of them distributed along the line of the work.

The laying of the rails has been commenced at different points, and will be completed by the end of next month. Materials of the best quality are in a course of preparation for the horse path, and will be applied as fast as the laying of the rails advances, so that the whole road will be ready for travel and traffic within a few days after the laying of the rails shall have been finished.

The graduation of the Washington Rail Road is completed as far as to the district line, with the exception of the deep cuts. These, it is confidently expected, will also be finished by the first day of January next.

The masonry on this road is all completed except the "Thomas Viaduct," over the Patapsco, and this stupendous structure, it is not doubted, will be finished in due time to receive the rails, with the other parts of the road.

The masonry on this road, between its deflection from the Baltimore and Ohio Rail Road and the line of the District of Columbia, will be about 39,000 perches. It has been executed in the most substantial and permanent manner; and so far it has shown no indication of the least imperfection, either as regards its foundations, materials or construction. Indeed, I believe that it may safely be asserted, that there is not any better executed stone work, either as respects durability or appropriateness to the purpose intended, in this country.

The requisite materials for laying down the rails, on the entire line of this road, are nearly all distributed along the road, except the iron rails and their necessary fixtures, only a part of which have been received.

The whole have, however, been ordered, and we have assurances that they will be received by the time they may be wanted. The actual laying of the rails, at several points along the Washington road, has been commenced under three different contractors, and the whole will be completed by the 1st day of July next, or earlier, should the iron arrive in time.

If the Board conclude within the present month, to authorise the graduation of that part of this road lying within the District of Columbia, it may also be completed by the middle of next summer, so as to have the rails laid there and the whole line in operation for travel and transportation within less than one year from this date.

Respectfully submitted,

Caspar W. Weyer, Superintendent, &c.

Office of the Treasurer of the Baltimore and Ohio Railroad Co. 1st October, 1834.

Philip E. Thomas, Esq. President.

Sir: The following statement in relation to the fiscal operations of the Baltimore and Ohio Railroad Company during the past year is respectfully submitted. Your ob't serv't,

W. H. Murray, Treas'r, &c.

The Baltimore and Ohio Railroad Company, in account with William H. Murray, Treasury.

To Cash paid Chesapeake and Ohio Canal Company, for graduation of that portion of the 6th Division, between the Point of Rocks and Harper's Ferry, undertaken by that Company,		$155,166.67
Cash paid Graduation and Masonry on that part of the Road not undertaken by the Chesapeake and Ohio Canal Company,		106,537.82
Cash paid construction of Depots, Stables, Turnouts, Sidelings, and Engine house,		11,676.19
Cash paid materials for Rail Tracks,		5,163.17
Cash paid construction of Carriages, Wagons, &c.		69,683.60
Cash paid construction of Locomotive Engines,		16,426.99
Cash paid Engineer department,		5,492.51
Cash paid damages and right of way,		8,864.00
Cash paid for Patent Rights,		2,500.00
Cash paid Law Expenses,		2,002.75
Cash paid Office Expenses, Salaries, and Contingencies,		5,540.70
Cash paid Instalments on the Washington Railroad Stock,		375,520.00
Cash advanced to the Washington Railroad,		28,406.67
Cash paid Union Bank, loan refunded,		200,000.00
Cash paid Mechanics Bank, loan refunded,		75,000.00
Cash paid Interest on State and City Stocks, and to Banks,		32,424.87
Cash paid expenses of Transportation, per return of the Superintendent,	$88,416.74	
Cash paid Horse Feed on hand, provided for the next winter's consumption,	6,928.04	
		95,344.78
Cash paid repairs of Railroad and Machinery	38,845.67	
Materials on hand for future use,	990.50	
		39,836.17
Unexpended balances in the hands of disbursing officers,		33,130.57
		$1,268,717.46
By Balance on hand at the credit of the Company, as per last Annual Report,		$54,820.97
Cash received for Instalments on 29,895 Shares of Stock, a $5.00,		149,475.00
Cash received, being the final payment upon 5,000 shares, owned by the State of Maryland,		125,000.00
Cash received, being the final payment upon 5,000 shares owned by the City of Baltimore, say proceeds of sale of $175,000, five per cent. Stock, issued by the City,		175,756.08
Cash received from sale of forfeited Stock,		940.00
Cash received for revenue from 30th September, 1833, to 30th September, 1834, per return of Superintendent,		205,436.58
Arrearages of revenue not collected last year,		17,537.34
Cash received for Bonds issued to Union Bank of Maryland, applicable to the payment of Instalments on Stock in the Washington Railroad,		500,000.00
Balance,		39,751.49
		$1,268,717.46

The Company have acquired since the last annual report, in addition to the real estate which it then owed, the following pieces of property, viz.:

1st. Three lots in the town of Berlin, situated half way between the Point of Rocks and Harper's Ferry. This purchase will afford a convenient *depot* immediately where the railway is crossed by a county road, which opens a communication with Loudoun county, in Virginia, and the Middletown Valley, in Maryland.

2d. That piece or parcel of land lying between the Baltimore and Ohio and the Washington Railroads, at the point of their separation near the Viaduct over the Patapsco.

3d. A lot of ground adjoining the land heretofore conveyed to the Company by James Carroll, for the Mount Clare Depot. This lot is situated north of that depot, and affords a convenient communication with Pratt street.

W. H. MURRAY, Treas'r, &c.

The Baltimore and Ohio Railroad Company, Washington Branch, in account with Wm. H. Murray, Treasurer.

Cr.

By Cash Received on 10,000 Shares of Stock, being $50 per Share,	$500,000.00	
Cash received from the sale of Stock, received from the State of Maryland, . .	350,000.00	
Cash received from the Mechanics' Bank of Baltimore, as a loan,	75,000.00	
Cash received from the Baltimore and Ohio Railroad Company,	28,406.67	
		$953,406.67

Dr.

To Cash paid Engineer department, . .	$27,812.35	
Cash paid for Right of Way, . . .	71,651.23	
Cash paid for Graduation and Masonry,	698,950.61	
Cash paid Department of Construction, being for materials for Rail track, . .	56,096.54	
Cash paid Department of Machinery, including purchase of patents, . . .	3,437.50	
Cash paid Interest on Loans, . . .	13,658.29	
Cash paid Law expenses, . . .	675.00	
Cash paid Office expenses, Salaries, and Contingencies, .	4,102.51	
Unexpended balances in the hands of disbursing officers, .	44,591.68	
Balance on hand this day, . . .	32,430.96	
		$953,406.67

W. H. MURRAY, Treas'r.

Harper's Ferry and Baltimore.—The portion of the Ohio Railroad between the Point of Rocks and Harper's Ferry, a distance of twelve miles, is on the point of completion. It will be opened for travel and transportation on Monday, 1st Dec., when there will be a perfect railroad communication from Baltimore to Harper's Ferry, of eighty-two miles in length. The extension of the improvement to that important point will materially augment the business of the Road, and benefit, in a corresponding degree, the trade of our country.—[Balt. Am.]

Railroad Accident.—On the afternoon of Tuesday last, one of the cars on the Newark Railroad, was driven, by the carelessness of the driver, into the apperture occasioned by opening the draw of the bridge over the Passaick, for a vessel to pass, with a concussion that injured many of the passengers, about twenty in number, severely. Fortunately, the frame work of the bridge sustained the car, and probably saved the lives of many, as the distance the horses were precipitated was about twenty feet or more. The escape is almost miraculous, and there should be some regulation as to opening the draw at the bridge, as the declivity is sufficient to very much increase the speed or velocity of the car.

Railroad Accident.—Yesterday morning between 9 and 10 o'clock, as the train of cars from Westborough were passing through Natick, a short distance above the centre of the town, the engine came in contact with the chaise of Mr. David Rice of that town, who was crossing the track, and not seen till the moment. The horse was killed instantly, the chaise was dashed in pieces, and Mr. Rice seriously injured on his head, though it is thought he may recover. The passengers united in freeing the engineer from the imputation of blame.

23d CONGRESS—Second Session.

Monday, December 1, 1834.

This day commenced, at the Capitol, in the City of Washington, the Second Session of the Twenty Third Congress.

PRESIDENT'S MESSAGE.

Fellow Citizens of the Senate, and House of Representatives:

In performing my duty at the opening of your present session, it gives me pleasure to congratulate you again upon the prosperous condition of our beloved country. Divine Providence has favored us with general health, with rich rewards in the fields of agriculture and in every branch of labor, and with peace to cultivate and extend the various resources which employ the virtue and enterprize of our citizens. Let us trust that in surveying a scene so flattering to our free institutions, our joint deliberations to preserve them may be crowned with success.

Our foreign relations continue, with but few exceptions, to maintain the favorable aspect which they bore in my last annual message, and promise to extend those advantages which the principles that regulate our intercourse with other nations are so well calculated to secure.

The question of the northeastern boundary is still pending with Great Britain, and the proposition made in accordance with the resolution of the Senate, for the establishment of a line according to the treaty of 1783, has not been accepted by that government.—Believing that every disposition is felt on both sides to adjust this perplexing question to the satisfaction of all the parties interested in it, the hope is yet indulged that it may be effected on the basis of that proposition.

With the governments of Austria, Russia, Prussia, Holland, Sweden and Denmark, the best understanding exists. Commerce with all, is fostered and protected by reciprocal good will, under the sanction of liberal conventional or legal provisions.

In the midst of her internal difficulties, the Queen of Spain has ratified the Convention for the payment of the claims of our citizens arising since 1819. It is in the course of execution on her part, and a copy of it is now laid before you for such legislation as may be found necessary to enable those interested to derive the benefits of it.

Yielding to the force of circumstances, and to the wise counsels of time and experience, that power has finally resolved no longer to occupy the unnatural position in which she stood to the new governments established in this hemisphere. I have the great satisfaction of stating to you that in preparing the way for the restoration of harmony between those who have sprung from the same ancestors, who are allied by common interests, profess the same religion, and speak the same language, the U. States have been actively instrumental. Our efforts to effect this good work, will be persevered in while they are deemed useful to the parties, and our entire disinterestedness continues to be felt and understood. The act of Congress to countervail the discriminating duties, levied to the prejudice of our navigation, in Cuba and Porto Rico, has been transmitted to the Minister of the United States, to be communicated to the Government of the Queen. No intelligence of its receipt has yet reached the Department of State. If the present condition of the country permits the Government to make a careful and enlarged examination of these important portions of its dominions, no doubt is entertained that their future intercourse with the United States will be placed upon a more just and liberal basis.

The Florida archives have not yet been selected and delivered. Recent orders have been sent to the agent of the United States at Havana, to return with all that he can obtain, so that they may be in Washington before the session of the Supreme Court, to be used in the legal questions there pending, to which the Government is a party.

Internal tranquillity is happily restored to Portugal. The distracted state of the country rendered unavoidable the postponement of a final payment of the just claims of our citizens. Our diplomatic relations will be soon resumed, and the long subsisting friendship with that power affords the strongest guarantee that the balance due will receive prompt attantion.

The first instalment due under the convention of indemnity with the King of the Two Scicilies, has been duly received, and an offer been made to extinguish the whole by a prompt payment—an offer I did not consider myself authorized to accept, as the indemnification provided is the exclusive property of individual citizens of the United States. The original adjustment of our claims, and the anxiety displayed to fulfil at once the stipulations made for the payment of them, are highly honorable to the government of the Two Sicilies. When it is recollected that they were the result of the injustice of an intrusive power, temporarily dominant in its territory, a repugnance to acknowledge and to pay which would have been neither unnatural nor unexpected, the circumstances cannot fail to exalt its character for justice and good faith in the eyes of all nations.

The treaty of Amity and Commerce between the United States and Belgium, brought to your notice in my last annual message, as sanctioned by the Senate, but the ratification of which had not been exchanged, owing to a delay in its reception at Brussels, and a subsequent absence of the Belgian Minister of Foreign Affairs, has been, after mature deliberation, finally disavowed by that government as inconsistent with the powers and instructions given to the Minister who negotiated it. This disavowal was entirely unexpected, as the liberal principles embodied in the convention, and which from the ground-work of the objections to it, were perfectly satisfactory to the Belgian representatives, and were supposed to be not only within the powers granted, but especially conformable to the instrbctions given to him. An offer, not yet accepted, has been made by Belgium to renew negotiations for a treaty less liberal in its provisions, on questions of general maritime law.

Our newly established relations with the Sublime Porte, promise to be useful to our commerce, and satisfactory in every respect to this government. Our intercourse with the Barbary Powers continues without important change, except that the present political state of Algiers has induced me to terminate the residence there of a salaried consul, and to substitute an ordinary consulate, to remain so long as the place continues in the possession of France. Our first treaty with one of these powers—the Emperor of Morocco—was formed in 1786, and was limited to fifty years. That period has almost expired. I shall take measures to renew it with the greater satisfaction, as its stipulations are just and liberal, and have been, with mutual fidelity and reciprocal advantage, scrupulously fulfilled.

Intestine dissentions have too frequently occurred to mar the prosperity, interrupt the commerce, and distract the governments of most of the nations of this hemisphere, which have separated themselves from Spain. When a firm and permanent understanding with the mother country shall have produced a formal acknowledgment of their independence, and the idea of danger from that quarter can be no longer entertained, the friends of freedom expect that those countries, so favored by nature, will be distinguished for their love of justice and their devotion to those peaceful arts, the assiduous cultivation of which confers honor upon nations and gives value to human life. In the mean time I confidently hope, that the apprehensions entertained, that some of the people of these luxuriant regions may be tempted, in a moment of unworthy distrust of their own capacity for the enjoyment of liberty, to commit the too common error of purchasing present repose by bestowing on some favorite leaders the fatal gift of irresponsible power—will not be realized. With all these Governments, and with that of Brazil, no unexpected changes in our relations have occurred during the present year. Frequent causes of just complaint have arisen upon the part of the citizens of the United States—sometimes from the irregular action of the constituted subordinate authorities of the maritime regions, and sometimes from the leaders or partizans of those in arms against the established government. In all cases, representations have been, or will be made, and as soon as their political affairs

are in a settled position, it is expected that our friendly remonstrances will be followed by adequate redress.

The Government of Mexico made known in December last, the appointment of Commissioners and a Surveyor, on its part, to run, in conjunction with ours, the boundary line between its territories and the United States, and excused the delay for the reasons anticipated—the prevalence of civil war.—The Commissioners and Surveyors not having met within the time stipulated by the treaty, a new arrangement became necessary, and our Chargé d'Affaires was instructed, in January last, to negotiate, in Mexico, an article additional to the pre-existing treaty. This instruction was acknowledged, and no difficulty was apprehended in the accomplishment of that object. By information just received, that additional article to the treaty will be obtained, and transmitted to this country, as soon as it can receive the ratification of the Mexican Congress.

The re-union of the three States of New Grenada, Venezuela, and Equador, forming the Republic of Colombia, seems every day to become more improbable. The Commissioners of the two first are understood to be now negotiating a just division of the obligations contracted by them when united under one government. The civil war in Equador, it is believed, has prevented even the appointment of a commissioner on its part.

I propose, at an early day, to submit in the proper form, the appointment of a diplomatic agent to Venezuela. The importance of the commerce of that country to the United States, and the large claims of our citizens upon the government, arising before, and since the division of Colombia, rendering it, in my judgment, improper longer to delay this step.

Our representatives to Central America, Peru, and Brazil, are either at, or on their way to, their respective posts.

From the Argentine Republic from which a Minister was expected to this Government, nothing further has been heard. Occasion has been taken, on the departure of a new Consul to Buenos Ayres, to remind that Government that its long delayed Minister, whose appointment had been made known to us, had not arrived.

It becomes my unpleasant duty to inform you that this pacific and highly gratifying picture of our foreign relations, does not include those with France at this time. It is not possible that any Government and people could be more sincerely desirous of conciliating a just and friendly intercourse with a friendly nation, than are those of the United States with their ancient ally and friend. This disposition is founded as well on the most grateful and honorable recollections associated with our struggle for independence, as upon a well grounded conviction that it is consonant with the true policy of both. The people of the United States could not, therefore, see without the deepest regret, even a temporary interruption of the friendly relations between the two countries—a regret which would, I am sure, be greatly aggravated if there should turn out to be any reasonable ground for attributing such a result to any act of omission or commission on our part. I derive, therefore, the highest satisfaction from being able to assure you that the whole course of this Government has been characterised by a spirit so conciliatory and forbearing as to make it impossible that our justice and moderation should be questioned, whatever may be the consequences of a longer perseverance on the part of the French Government in her omission to satisfy the conceded claims of our citizens.

The history of the accumulated and unprovoked aggressions upon our commerce, committed by authority of the existing Governments of France, between the years 1800 and 1817, has been rendered too painfully familiar to Americans to make its repetition either necessary or desirable. It will be sufficient here to remark, that there has, for many years, been scarcely a single administration of the French Government by whom the justice and legality of the claims of our citizens to indemnity, were not, to a very great extent, admitted; and yet near a quarter of a century has been wasted in ineffectual negotiations to secure it.

Deeply sensible of the injurious effects resulting from this state of things upon the interests and character of both nations, I regarded it as among my first duties to cause one more effort to be made to satisfy France, that a just and liberal settlement of our claims was as well due to her own honor as to their incontestible validity. The negotiation for this purpose was commenced with the late Government of France, and was prosecuted with such success, as to leave no reasonable ground to doubt, that a settlement of a character quite as liberal as that which was subsequently made, would have been effected, had not the revolution, by which the negotiation was cut off, taken place. The discussions were resumed with the present government, and the result showed, that we were not wrong in supposing, that an event by which the two governments were made to approach each other so much nearer in their political principles, and by which the motives for the most liberal and friendly intercourse were so greatly multiplied, could exercise no other than a salutary influence upon the negotiation. After the most deliberate and thorough examination of the whole subject, a treaty between the two governments was concluded and signed at Paris on the 4th of July, 1831, by which it was stipulated that "the French Government, in order to liberate itself from all the reclamations preferred against it by the citizens of the United States, for unlawful seizures, captures, sequestrations, confiscations, or destruction of their vessels, cargoes, or other property, engages to pay a sum of twenty-five millions of francs to the United States, who shall distribute it among those entitled, in the manner and according to the rules it shall determine;" and it was also stipulated on the part of the French Government, that this twenty-five millions of francs should "be paid at Paris in six annual instalments of four millions one hundred and sixty-six thousand six hundred and sixty-six francs and sixty six centimes each, into the hands of such person or persons as shall be authorized by the Government of the United States to receive it." The first instalment to be paid "at the expiration of one year next following the exchange of the ratifications of this convention, and the others at successive intervals of a year, one after another, till the whole shall be paid. To the amount of each of the said instalments shall be added interest at four per centum thereupon, as upon the other instalments then remaining unpaid, the said interest to be computed from the day of the exchange of the present convention."

It was also stipulated on the part of the United States, for the purpose of being completely liberated from all the reclamations presented by France on behalf of its citizens, that the sum of one million five hundred thousand francs should be paid to the Government of France, in six annual instalments, to be deducted out of the annual sums which France had agreed to pay, interest thereupon being in like manner computed from the day of the exchange of the ratifications. In addition to this stipulation, important advantages were secured to France by the following article, viz.: "The wines of France, from and after the exchange of the ratifications of the present Convention, shall be admitted to consumption in the States of the Union, at duties which shall not exceed the following rates by the gallon, (such as it is used at present for wines in the United States,) to wit: six cents for red wines in casks; ten cents for white wines in casks; and twenty-two cents for wines of all sorts in bottles. The proportions existing between the duties on French wines thus reduced, and the general rates of the tariff which went into operation the first January, 1829, shall be maintained, in case the Government of the United States should think proper to diminish those general rates in a new tariff.

In consideration of this stipulation, which shall be binding on the United States for ten years, the French Government abandons the reclamations which it had formed in relation to the 8th article of the treaty of cession of Louisiana. It engages, moreover, to establish on the *long staple* cottons of the United States, which, after the exchange of the ratifications of the present Convention, shall be brought directly thence to France by the vessels of the United States, or by French vessels, the same duties as on *short staple* cottons.

This treaty was duly ratified in the manner prescribed by the constitution of both countries and the ratification was exchanged at the city of Washington on the 2d of February, 1832. On account of its commercial stipulations it was, in five days thereafter laid before the Congress of the United States, which proceeded to enact such laws favorable to the commerce of France as were necessary to carry it into full execution; and France has, from that period to the present been in the unrestricted enjoyment of the valuable privileges that were thus secured to her. The faith of the French nation having been thus solemnly pledged, through its constitutional organs, for the liquidation and ultimate payment of the long deferred claims of our citizens, as also for the adjustment of other points of great and reciprocal benefits to both countries, and the United States having with a fidelity and promptitude by which their conduct will, I trust, be always characterized, done every thing that was necessary to carry the treaty into full and fair effect on their part, counted with the most perfect confidence, on equal fidelity and promptitude on the part of the French Government. In this reasonable expectation we have been, I regret to inform you, wholly disappointed. No legislative provision has been made by France for the execution of the treaty, either as it respects the indemnity to be paid, or the commercial benefits to be secured to the United States, and the relations between the United States and that power, in consequence thereof, are placed in a situation threatening to interrupt the good understanding which has so long and so happily existed between the two nations.

Not only has the French Government been thus wanting in the performance of the stipulations it has so solemly entered into with the U States, but its omissions have been marked by circumstances which would seem to leave us without satisfactory evidences, that such performance will certainly take place at a future period. Advice of the exchange of ratifications reached Paris prior to the 8th April, 1832. The French Chambers were then sitting and continued in session until the 21st of the month, and although one instalment of the indemnity was payable on the 2d of February, 1833, one year after the exchange of ratifications, no application was made to the Chambers for the required appropriation, and in consequence of no appropriation having then been made, the draft of the United States Government for that instalment was dishonored by the Minister of Finance, and the United States thereby involved in much controversy. The next session of the Chambers commenced on the 19th November, 1832, and continued until the 25th April, 1833. Notwithstanding the omission to pay the first instalment, had been made the subject of earnest remonstrance on our part, the treaty with the United States, and a bill making the necessary appropriations to execute it, were not laid before the Chamber of Deputies until the 6th of April, nearly five months after its meeting, and only nineteen days before the close of the session. The bill was read and referred to a committee, but there was no further action upon it. The next session of the Chambers commenced on the 25th of April, 1833, and continued until the 26th of June following. A new bill was introduced on the 11th of June, but nothing important was done in relation to it during the session. In the month of April, 1834, nearly three years after the signature of the treaty, the final action of the French Chambers upon the bill to carry the treaty into effect was obtained, and resulted in a refusal of the necessary appropriations. The avowed grounds upon which the bill was rejected, are to be found in the published debates of that body, and no observations of mine can be necessary to satisfy Congress of their utter insufficiency. Although the gross amount of the claims of our citizens is probably greater than will be ultimately allowed by the Commissioners, sufficient is, nevertheless shown, to render it absolutely certain that the indemnity falls far short of the actual amount of our just claims, independently of the question of damages and interest for the detention. That the settlement involveda sacrifice in this respect was well known at the time—a sacrifice which was cheerfully acquiesced in by the different branches of the Federal Government, whose action upon the treaty was required, from a sincere desire to avoid further collission upon this old and disturding subject, and in the confident expectation that the general relations between the two countries would be improved thereby.

The refusal to vote the appropriation, the news of which was received from our Minister in Paris, about the 15th day of May last, might have been considered the final determination of the French government not to execute the stipulations of the treaty, and would have justified an immediate communication of the facts to Congress, with a recommendation of such ultimate measures as the interest and honor of the U. States might seem to require. But with the news of the refusal of the Chambers to make the appropriation, were conveyed the regrets of the King, and a declaration that a national vessel should be forthwith sent out, with instructions to the French Minister to give the most ample explanations of the past, and the strongest assurances for the future. After a long passage the promised despatch-vessel arrived. The pledges given by the French Minister, upon receipt of his instructions, were, that as soon after the election of the new members as the charter would permit, the legislative Chambers of France should be called together, and the proposition for an appropriation laid before them; that all the constitutional powers of the King and his Cabinet should be exerted to accomplish the object; and that the result should be made known early enough to be commu
Congress at the commencement of the pr

[*See page*

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 695.)

OF THE CHANGES IN THE MATERIAL OF THE ANIMAL BODY DURING LIFE.—We have seen the motions performed in the animal body through the actions of the muscles and the play of the mechanical parts, and we have had occasion to reflect on the action of the heart, and the motion of the blood in the circulation; but these are as nothing, compared with the interest of our present subject—the changes going forward in the solid material of the frame. It is not surprising that the individual who retains every peculiarity of body and of mind, whose features, whose gait, and mode of action, whose voice, gestures, and complexion, we are ready to attest as the very proof of personality, should in the course of a few days change every particle of his solid fabric?—that he whom we suppose we saw, is, as far as his body is concerned, a perfectly different person from him we now see? That the fluids may change we are ready to allow, but that the solids are thus ever shifting seems at first improbable. And yet, if there be any thing firmly established in physiology, if there be truth in the science at all, this fact is incontrovertible.

There is nothing like this in inanimate nature. It is beautiful to see the shooting of a crystal—to note, first, the formation of integrant particles from their elements in solution, and these, assuming a regular form under the influence of attraction or crystalline polarity, producing a determinate shape; but the form is permanent. In the different processes of elective attraction, and in fermentation, we perceive a commotion, but in a little time the products are formed, and the particles are at rest. There is in these instances nothing like the revolutions of the living animal substance, where the material is alternately arranged and decomposed. The end of this is that the machinery of the body is ever new, and possesses a property within itself of mending that which was broken, of throwing off that which was useless, and of building up that which was insecure and weak; of repelling disease, or of controlling it, and substituting what is healthful for that which is morbid. The whole animal machinery we have seen to be a thing fragile and exposed to injury; without this continual change of material, and this new modelling of that material, our lives would be more precarious; the texture of our bodies would be spoiled like some fine piece of mechanism which had stopped, and no workman would have science sufficient to reconstruct it. But by this process the minute particles of the body die successively; not as in the final death of the whole body, but part by part is deprived of its vitality, and taken away into the general circulation, whilst new parts are endowed with the property of life, and are built up in their place. By this revolution, we see nature, instead of having to establish a new mode of action for every casualty, heals all wounds, unites all broken bones, throws off all morbid parts by the continuance of its usual operations; and the surgeon, who is modest in his calling, has nothing to do but to watch, lest ignorance or prejudice interfere with the process of nature. This property of the living body to restore itself when deranged, or to heal itself when broken or torn, is an action which so frequently assumes the appearance of reason, as if it were adapting itself to the particular occasion, that even the last great luminary in the science, Mr. John Hunter, speaks of parts of the body as "conscious of their imperfection," and "acting from the stimulus of necessity," thus giving the properties of mind to the body as the only explanation of phenomena so wonderful.

We make a moderate assumption, when we declare these changes to be under the guidance of the living principle. In a seed, or a nut, or an egg, we know that there is life, and from the length of time that these bodies will remain without change, we are forced to acknowledge that this life is stationary or dormant, and limited to the counteraction of putrefaction, or chemical decomposition; but no sooner does this principle become active, than a series of intestinal or internal changes are commenced, which are regularly progressive, without a moment's interruption, while life continues.

That principle, which may continue an indefinite number of days, months, or years, producing no change in all this time, begins at once to exhibit its influence, builds up the individual body, regulates the actions of secretion and absorption; and by its operation upon the material of the frame, stamps it with external marks of infancy, maturity, and age.

But let us examine the proofs of this universal change in the material of the body. It is not very long since a bone was supposed to be a concrete juice, and that the liquid parts were converted into solids, as we see mortar or Paris plaster from fluid assuming a solid form. But the anatomist began to observe that the bones were porous; that these pores admitted membranes and vessels; and some went so far before their brethren, as to assert that they saw arteries, veins, lymphatics, and nerves, going into the bone; in short, the opinion gradually grew stronger, that they were living parts, and subject to all the changes to which the softer parts of the living body were liable. An accident gave admirable proof of this. It was found that the bones of pigs, fed with the refuse of the dyer's vats, in which madder was contained, became tinged of a beautiful red color. It was this fact which ingenious physiologists made use of, and which enabled them to demonstrate the rapidity with which the old bone was carried away, and new bone substituted. The physiologist observed, that if he threw a bone into the fire, what is called the animal part was burned and dissipated, but there remained, imperishable by this process, a mass of earth, which proved to be the phosphate of lime. He thought of varying his experiment, and put the bone into acid, which dissolved that phosphate of lime, and left the bone to all outward appearance as before. It had its form, its membranes, its vessels, but when pressed it proved to be soft and pliant; the phosphate of lime having been dissolved and extracted, it was no longer capable of the office of a bone, to bear the weight and motions of the body. When the experiments with madder were resumed, it appeared that when this earth of bone was about to be secreted from the circulating vessels, and deposited in the membranes of the bone, it met with the coloring particles of the madder in the blood; and, as the chemist would explain, the madder and the phosphate of lime were precipitated, and filled all the interstices of the membranes and vessels. We shall not stop here to inquire into the admirable manner in which this hardening material of bone is deposited for the purposes of strength; it is only the change upon the material which we have now to contemplate.

If this earth of bone so colored had been deposited for a permanency, and built into these cells and crevices, like brick and mortar, the color would remain; but, however deeply the bones of an animal may be tinged in this manner, the color is not permanent, unless the animal continues to be fed with the madder. If its food be pure of the madder, even for a few weeks, and if after this the animal be killed, its bones are white, that is to say, the old particles of phosphate of lime are carried away by absorption, and with them the coloring material; and that newer bone which is deposited by the arteries is untinged and pure, having no coloring material to attract.

It is unnecessary to follow out those curious experiments by which the physiologist has shown the rapidity of the formation of a new bone around the broken end of an old one, and the deep tinge such new bone takes, compared with the fainter color of that which had been perfect, previous to the feeding with madder; the manner in which, by feeding the animal alternately with madder and without it, he contrives to exhibit different colored layers in the growing bone. It is sufficient for our purpose to know, that the densest part of the animal frame is subject to change, like the most delicate texture of the body, and that the only means of arresting the motion is to deprive it of life; if a part of a bone be killed by the application of a cautery, that moment it becomes permanent, and is subject to no change, whilst all the parts around it are undergoing their revolutions.

The bones of the legs and thighs, which suffer the fatigue of motion, and which support the weight of the body, without diminishing in their length, or altering in the slightest measurable degree their proper form, are nevertheless undergoing an operation of repair, in which the old particles are withdrawn, whilst new ones replace them. We see with what care the walls of a house are shored up to admit of repair—how carefully the workman must estimate the strength of his pillars and beams—how nicely he must hammer in his wedges, that every interstice may be filled, and no strain permitted; and if this operation fail in the slightest degree, it is attended with a rent of the wall from top to bottom. We say, then, that by the very awkwardness of this process, in which, after all, there is danger of the whole fabric tumbling about the workmen, we are called upon to admire how the solid pillars in our own frame are a thousand times renewed, whilst the plan of the original fabric is followed to the utmost nicety in their restoration. And if it deviate at all, it is only in a manner the more to surprise us, since on examination it will be discovered to result from an adaptation of the strength of material to some new circumstance, the increasing weight it has to support, or the jar that it is subject to from the change in the activity or exercise of the body.

There is a disease of the bone which illustrates this in a surprising manner, and proves to us, that however diseased and monstrous

in its shape the bone may be, yet there is a natural law operating, which by its prevalence will overcome the morbid action, and from a shapeless mass restore the bone to its natural condition.

This disease is called *necrosis*, which word signifies the *death* of the bone merely; but it is death in very peculiar circumstances; a new bone is formed around the old one; a large and clumsy cylinder is fashioned of the earth of bone, in the hollow of which the shaft of the old bone is contained. After a long time the old bone comes out through this new case, and, with the aid of the surgeon, it is altogether withdrawn from the limb. During all this process the patient is capable of supporting his weight upon that limb, so that it resembles on a large scale that change which we have described as going continually on in the molecules of the bone; a new part is substituted, and the old taken away.

If workmen were to take away a pillar in the following manner, their work would resemble the process of necrosis: first, they must rear a hollow cylinder around the old pillar, resting on the plinth and base, and extending to the capital, and having secured the union of the cylinder at top and bottom to the extremities of the pillar, they must take away the shaft, or middle piece of the old pillar, by perforating the new cylinder.

The reader may easily imagine that when this process is completed in a man's limb, it will be as clumsy as the leg of an elephant, large, firm, and shapeless; but the extraordinary circumstance is still to be described. This new bone is gradually diminished in its exterior surface, and its hollow filled up, and thus by a change scarcely perceptible it resumes the form and dimensions of the original bone; and, after a time, the anatomist might examine this limb, and find, neither in the articulating surfaces, nor in the spines and ridges, nor in the points of attachment for ligaments and muscles, any thing to indicate the extraordinary revolution that had taken place.

What explanation have we to give of this change? There can be no doubt that the material is not the same; for we have the old bone in our hand, and the man is walking upon a new bone. Yet extraordinary, then, as this appears, it is not more inexplicable than the common phenomenon of the growth of an infant to maturity. There is a living principle which is permanent while the material changes; and this principle attracts and arranges, dissolves and throws off successive portions of the solids. There is a law influencing this living principle, which, in its operation on the material, shapes and limits the growth of every part, and carries it through a regular series of changes, in which its form and aptness for its office are preserved, whilst the material alone is altered.

The influence of disease will for a time disorder this modelling process, and produce tumors and distortions; but when at length the healthy action, that is the natural action, prevails, these incumbrances are carried away, and the fair proportions of the fabric are restored.

It is very pleasing to observe the different means employed where a slight change of circumstances demands it. This earth of bone—the phosphate of lime—is changing continually, but the teeth admit of no change; they consist of earth too—the phosphate, carbonate, and fluate of lime. Bodies calculated for such violent attrition, and with a surface so hard as to strike fire with steel, would be ill accommodated with such a property of changing as we have seen in the bones. They must therefore fall out, and be succeeded by new ones; and this process, familiar as it may be, is very curious when philosophically considered.

There are no teeth whilst yet the infant is at the breast; and when they rise they are attended with new appetites, and a necessity for change of food. When perfected, they form a range of teeth, neat and small, adapted to the child's jaws and the size of its bones. Were they to grow at once, or to fall out at once, it would prove a disturbance to the act of eating. They fall in succession; their fangs are absorbed, they are loose and jangling, and are easily extracted. But now comes the question, why are these teeth of the infant old at six years? Why are those that are to succeed, and be stationary for a series of years, to germinate and grow at the appointed time, like the buds in the axilla of a leaf? And when fully formed, why do they remain perfect for sixty years instead of six, at the end of which term the first set were old and decayed? No difference can be observed in the material of the teeth of the first or second set. The one will be as perfect as the other after remaining a hundred years in a charnel house. Can any one refuse his belief, then, when he sees so accurate a mechanical adaptation of the teeth to their places and their offices; can he, we say, refuse assent to this also, that there is a law impressed, a property by which the milk teeth shall fail and be discharged from the jaw in six years, whilst the others will last the natural life of the adult, if not injured by accidents, to which all parts are subject? This is not the only instance in which parts of the body lie dormant for a term of years, and are at a particular period of life developed and perfected—and which have, we may say, their time of infancy, perfection, and decay, whilst yet there is no material deterioration observable in the general frame.

We are thus brought to the consideration of a question which has not yet been fairly stated.

Those who say that life results from structure, and that the material is the ruling part, bid us look to the contrast of youth and age. The activity of limb and buoyancy of spirit they consider as a necessary consequence of the newness and perfection of organization in youth. On the other hand, a ruined tower, unroofed, and exposed to be broken up by alternation of frost and heat, dryness and moisture, wedged by the roots of ivy, and tottering to its fall, they compare with old age—with the shrunk limbs, tottering gait, shrivelled face, and scattered grey hair of the old.

But in all this there is not a word of truth. Whilst there is life and circulation there is change of the material of the frame, (and there is a sign of this if a broken bone unites, or a wound heals.) Ascribe the distinction to the rapidity of change, to the velocity of circulation, or to the more or less energy of action; but with the antiquity of the material it can have nothing to do. The roundness and fullness of flesh, the smoothness, transparency, and color of the cheek, belong to youth, as characteristic of the time of life, not as a necessary quality of the material! Is there a physiognomy in all nature—among birds, and beasts, and insects, and flowers—and shall man alone have no indication of his condition in the outward form and character?

The distinctions in the body, apparent in the stages of life, have a deeper source than the accidental effects of the deterioration of the material of the frame. The same changes which are wrought on the structure of the body in youth, and in the spring of life, are going on in the last term of life; but the fabric is rebuilt on a different plan. The law of the formation is still inherent in the life which has hurried the material of the body through a succession of changes; and each stage, from the embryo to the fœtus, the fœtus to the child, from that to adolescence, to maturity, and to the condition of old age, has its outward form, as indicative of internal qualities, but not of the perfection or imperfection of the gross material. We might as well consider the difference in the term of life of the annual or biennial plant, as compared with the oak, or the ephemeris fly as compared with the bird that hawks at it, to be in the qualities of the matter which forms them, as that the outward characters of the different stages of human life arose from the perfection or imperfection of the material of the body. Not only has every creature its appointed term of life, but we have shown that parts of the human body do not, in this respect, bear a relation to the whole: organs are changed and disappear; others, in the mean time, at their regulated period, shoot to perfection, and again decay before the failure of the body. What can more distinctly show that it is the principle of life that directs all; and that on it the law is imprinted which orders our formation, and all the revolutions we undergo. The material of the body, solid and fluid, is moved by this influence, and varies every day, part by part dying every hour, and renewed, until the series of its changes on the gross material of the body is accomplished in an entire and final separation.

The grand phenomena of nature make powerful impression on our imagination, and we acknowledge them to be under the guidance of Providence; but it is more pleasing, more agreeable to our self-importance, it gives us more confidence in that Providence, to discover that the minutest changes in nature are equally His care, and that "all things do homage."

Although it be true that every thing in nature, being philosophically contemplated, will lead to the same conclusions, yet the occurrences around us steal so imperceptibly on our observation, all the objects of nature, or at least vegetable and animal productions, grow up by so slow a process by our side, that we do not consider them at all in the same way as we should do if they started suddenly upon our vision.

It is this familiarity with the qualities of a living body, and a habit of seeing without reflection, which has made it necessary to carry the reader through so long a course of observation and reasoning to excite attention to the admirable structure of his own frame, and its adaptation to the earth we inhabit—to perceive that every thing is formed with a strict relation to the human faculties and organs, to extend our dominion, and to multiply our sources of enjoyment. It is by seeing the plan of Providence in the establishment of relations between the condition

of our being and the material world, that we learn to comprehend that unity of design in the creation in which we form so great a part.

This exaltation of our nature is not like the influence of pride or common ambition. We may use the words of Socrates to his scholar, who saw in the contemplation of nature only a proof of his own insignificance, and concluded "that the gods had no need of him," which drew this answer from the sage: "The greater the munificence they have shown in the care of thee, so much the more honor and service thou owest them!"

PRESIDENT'S MESSAGE—continued from p. 757.

sion. Relying upon these pledges, and not doubting that the acknowledged justice of our claims, the promised exertions of the King and his Cabinet, and, above all, that sacred regard for the national faith and honor for which the French character has been so distinguished, would secure an early execution of the treaty in all its parts, I did not deem it necessary to call the attention of Congress to the subject at the last session.

I regret to say, that the pledges made through the Minister of France have not been redeemed. The new Chambers met on the 31st July last, and although the subject of fulfilling treaties was alluded to in the speech from the throne, no attempt was made by the King or his Cabinet to procure an appropriation to carry it . . execution. The reasons given for this omission, although they might be considered sufficient in an ordinary case, are not consistent with the expectations founded upon the assurances given here, for there is no constitutional obstacle to entering into legislative business at the first meeting of the Chambers. This point, however, might have been overlooked, had not the Chambers, instead of being called to meet at so early a day, that the result of their deliberations might be communicated to me, before the meeting of Congress, been prorogued to the 29th of the present month—a period so late that their decision can scarcely be made known to the present Congress, prior to their dissolution, To avoid this delay, our Minister in Paris, in virtue of the assurance given by the French Minister in the United States, strongly urged the convocation of the Chambers at an earlier day, but without success. It is proper to remark, however, that this refusal has been accompanied with the most positive assurances, on the part of the Executive Government of France, of their intention to press the appropriation at the ensuing session of the Chambers.

The executive branch of this government has, as matters stand, exhausted all the authority upon the subject with which it is invested, and which it had any reason to believe could be beneficially employed.

The idea of acquiescing in the refusal to execute the treaty will not, I am confident, be for a moment entertained by any branch of this government; and further negociation is equally out of the question.

If it shall be the pleasure of Congress to await the further action of the French Chambers, no further consideration of the subject will, at this season, probably be required at your hands. But if, from the original delay in asking for an appropriation, from the refusal of the Chambers to grant it when asked, from the omission to bring the subject before the Chambers at their last session, from the fact that, including that session, there have been five different occasions when the appropriation might have been made, and from the delay in convoking the Chambers until some weeks after the meeting of Congress, it was well known that a communication of the whole subject to Congress at the last session was prevented by assurances that it should be disposed of before its present meeting, you should feel yourselves constrained to doubt whether it be the intention of the French Government in all its branches to carry the treaty into effect, and think that such measures as the occasion may be deemed to call for, should be now adopted, the important question arises what those measures shall be.

Our institutions are essentially pacific. Peace and friendly intercourse with all nations are as much the desire of our government as they are the interest of the People. But these objects are not to be permanently secured, by surrendering the rights of our citizens, or permitting solemn treaties for their indemnity in cases of flagrant wrong, to be abrogated or set aside.

It is undoubtedly in the power of Congress seriously to affect the agricultural and manufacturing interests of France, by the passage of laws relating to her trade with the United States. Her products, manufactures, and tonnage, may be subjected to heavy duties in our ports, or all commercial intercourse with her may be suspended. But there are powerful, and, to my mind, conclusive objections to this mode of proceeding. We cannot embarrass or cut off the trade of France, without, at the same time, in some degree, embarrassing or cutting off our own trade. The injury of such a warfare must fall, though unequally, upon our citizens, and could not but impair the means of the Government, and weaken that united sentiment in support of the rights and honor of the nation which must now pervade every bosom.

Nor is it impossible that such a course of legislation would introduce once more into our national councils, those disturbing questions in relation to the tariff of duties which have been so recently put to rest. Besides, by every measure adopted by the Government of the United States with the view of injuring France, the clear perception of right, which will induce our own people, and the rulers and people of all other nations, even of France herself, to pronounce our quarel just, will be obscured, and the support rendered to us in a final resort to more decisive measures, will be more limited and equivocal. There is put one point in the controversy, and upon that the whole civilized world must pronounce France to be in the wrong. We insist that she shall pay us a sum of money which she has acknowledged to be due; and of the justice of this demand there can be but one opinion among mankind. True policy seems to dictate, that the question at issue should be kept thus disencumbered, and that not the slightest pretence should be given to France to persist in her refusal to make payment, by any act on our part affecting the interest of her people. The question should be left as it is now, in such an attitude that when France fulfils her treaty stipulations, all controversy will be at an end.

It is my conviction that the United States ought to insist on a prompt execution of the treaty, and in case it be refused, or longer delayed, take redress into their own hands. After the delay on the part of France of a quarter of a century in acknowledging these claims by treaty, it is not to be tolerated that another quarter of a century is to be wasted in negociating about the payment. The laws of nations provide a remedy for such occasions. It is a well settled principle of the international code, that where one nation owes another a liquidated debt, which it refuses or neglects to pay, the aggrieved party may seize on the property belonging to the other, its citizens or subjects, sufficient to pay the debt, without giving just cause of war. This remedy has been repeatedly resorted to, and recently by France herself, towards Portugal, under circumstances less unquestionable.

The time at which resort should be had to this, or any other mode of redress, is a point to be decided by Congress. If an appropriation shall not be made by the French chambers at their next session, it may justly be concluded that the Government of France has finally determined to disregard its own solemn undertaking, and refuse to pay an acknowledged debt. In that event, every day's delay on our part will be a stain upon our national honor, as well as a denial of justice to our injured citizens. Prompt measures, when the refusal of France shall be complete, will not only be most honorable and just, but will have the best effect upon our national character.

Since France, in violation of the pledges given through her minister here, has delayed her final action so long that her decision will not probably be known in time to be communicated to this Congress, I recommend that a law be passed authorising reprisals upon French property, in case provisions shall not be made for the payment of the debt at the approaching session of the French Chambers. Such a measure ought not to be considered by France as a menace. Her pride and power are too well known to expect any thing from her fears, and preclude the necessity of a declaration that nothing partaking of the character of intimidation is intended by us. She ought to look upon it as the evidence only of an inflexible determination on the part of the United States to insist on their rights. That Government, by doing only what it has itself acknowledged to be just, will be able to spare the United States the necessity of taking redress in their own hands, and save the property of French citizens from that seizure and sequestration which American citizens so long endured without retaliation or redress. If she should continue to refuse that act of acknowledged justice, and in violation of the law of nations, make reprisals on our part the occasion of hostilities against the United States, she would but add violence to injustice, and could not fail to expose herself to the just censure of civilized nations, and the retributive judgments of Heaven.

Collision with France is the more to be regretted, on account of the position she occupies in Europe in relation to liberal institutions. But, in maintaining our national rights and honor, all Governments are alike to us. If, by a collision with France, in a case where she is clearly in the wrong, the march of liberal principles shall be impeded, the responsibility for that result, as well as every other, will rest on her own head.

Having submitted these considerations, it belongs to Congress to decide, whether, after what has taken place, it will still await the further action of the French Chambers, or now adopt such provisional measures as it may deem necessary and best adapted to protect the rights and maintain the honor of the country. Whatever that decision may be, it will be faithfully enforced by the Executive, as far as he is authorized so to do.

According to the estimate of the Treasury Department, the revenue accruing, from all sources, during the present year, will amount to twenty millions six hundred and twenty-four thousand seven hundred and seventeen dollars, which with the balance remaining in the Treasury on the first of January last, of eleven millions seven hundred and two thousand nine hundred and five dollars, produces an aggregate of thirty-two millions three hundred and twenty-seven thousand six hundred twenty-three dollars. The total expenditure during the year for all objects, including the public debt, is estimated at twenty-five millions five hundred and ninety-one thousand three hundred and ninety dollars, which will leave a balance in the Treasury on the first of January, 1835, of six millions seven hundred and thirty-six thousand two hundred and thirty-two dollars. In this balance, however, will be included about one million one hundred and fifty thousand dollars of what was heretofore reported by the Department as not effective.

Of former appropriations it is estimated there will remain unexpended at the close of the year, eight millions two thousand nine hundred and twenty-five dollars, and that of this sum there will not be required more than five millions one hundred and forty-one thousand nine hundred and sixty-four dollars, to accomplish the objects of all the current appropriations. Thus it appears that after satisfying all those appropriations, and after discharging the last item of our public debt, which will be done on the first of January next, there will remain unexpended in the Treasury an effective balance of about four hundred and forty thousand dollars. That such should be the aspect of our finances is highly flattering to the industry and enterprize of our population, and auspicious of the wealth and prosperity which await the future cultivation of their growing resources. It is not deemed prudent, however, to recommend any change for the present in our impost rates, the effect of the gradual reduction now in progress in many of them, not being sufficiently tested to guide us in determining the precise amount of revenue which they will produce.

Free from public debt, at peace with all the world, and with no complicated interests to consult in our intercourse with foreign powers, the present may be hailed as that epoch in our history the most favorable for the settlement of those principles in our domestic policy, which shall be best calculated to give stability to our Republic, and secure the blessings of freedom to our citizens. Among these principles, from our past experience, it cannot be doubted, that simplicity in the character of the Federal Government, and a rigid economy in its administration, should be regarded as fundamental and sacred. All must be sensible that the existence of the public debt, by rendering taxation necessary for its extinguishment, has increased the difficulties which are inseparable from every exercise of the taxing power; and that it was, in this respect, a remote agent in producing those disturbing questions which grew out of the dissensions relating to the tariff. If such has been the tendency of a debt incurred in the acquisition and maintenance of our national rights and liberties, the obligations of which all portions of the Union cheerfully acknowledged, it must be obvious, that whatever is calculated to increase the burdens of Government without necessity, must be fatal to all our hopes of preserving its true character. While we are felicitating ourselves, therefore, upon the extinguishment of the national debt, and the prosperous state of our finances, let us not be tempted to depart from those sound maxims of public policy, which enjoin a just adaptation of the revenue to the expenditures that are consistent with a rigid economy, and an entire abstinence from all topics of legislation that are not clearly within the constitutional powers of the Government, and suggested by the wants of the country. Properly regarded, under such a policy, every diminution of the public burdens arising from taxation, gives to individual enterprise increased power, and furnishes to all the members of our happy Confederacy, new motives for patriotic affection and support. But above all, its most important effect will be found in its influence upon the character of the Government, by confining its action to those objects which will be sure to secure to it the attachment and support of our fellow citizens.

Circumstances make it my duty to call the attention of Congress to the Bank of the United States. Created for the convenience of the Government, that institution has become the scourge of the People. Its interference to postpone the payment of a portion

of the national debt, that it might retain the public money appropriated for that purpose, to strengthen it in a political contest—the extraordinary extension and contraction of its accommodations to the community—its corrupt and partisan loans—its exclusion of the public directors from a knowledge of its most important proceedings—the unlimited authority conferred on the President to expend its funds in hiring writers, and procuring the execution of printing, and the use made of that authority—the retention of the pension money and books, after the selection of new agents—the groundless claim to heavy damages, in consequence of the protest of the bill drawn on the French Government, have, through various channels, been laid before Congress. Immediately after the close of the last session, the Bank, through its President, announced its ability and readiness to abandon the system of unparalled curtailment, and the interruption of domestic exchanges, which it had practised upon from the 1st of August, 1833, to the 30th June, 1834, and to extend its accommodations to the community. The grounds assumed in this announciation, amounted to an acknowledgment that the curtailment, in the extent to which it had been carried, was not necessary to the safety of the Bank, and had been persisted in merely to induce Congress to grant the prayer of the Bank in its memorial relative to the removal of the deposites, and to give it a new charter. They were substantially a confession that all the real distresses which individuals and the country had endured for the preceding six or eight months, had been needlessly produced by it, with the view of affecting, through the sufferings of the people, the legislative action of Congress. It is a subject of congratulation, that Congress and the country had the virtue and firmness to bear the infliction; that the energies of our people soon found relief from this wanton tyranny, in vast importations of the precious metals from almost every part of the world; and that at the close of this tremendous effort to control our Government, the Bank found itself powerless, and no longer able to loan out its surplus means. The community had learned to manage its affairs without its assistance, and trade had already found new auxiliaries; so that on the first of October last, the extraordinary spectacle was presented of a National Bank, more than one half of whose capital was either lying unproductive in its vaults, or in the hands of foreign bankers.

To the needless distress brought on the country during the last session of Congress, has been added the open seizure of the dividends on the public stock, to the amount of one hundred and seventy thousand and forty one dollars, under pretence of paying damages, costs, and interest upon the protested French bill. The sum constituted a portion of the estimated revenues for the year 1834, upon which the appropriations made by Congress were based. It would have as soon been expected that our collectors would seize on the customs, or the receivers of our land offices on the monies arising from the sale of public lands, under pretences of claims against the United States, as the Bank would have retained the dividends. Indeed, if the principle be established that any one who chooses to set up a claim against the United States, may, without authority of law, seize on the public property or money wherever he can find it, to pay the claim, there will remain no assurance that our revenue will reach the Treasury, or that it will be applied after the appropriation to the purposes designated in the law. The paymasters of our army, and the pursers of our navy, may, under like pretences, apply to their own use monies appropriated to set in motion the public force, and in time of war leave the country without defence. This measure resorted to by the Bank is disorganizing and revolutionary, and if generally resorted to by private citizens in like cases, would fill the land with anarchy and violence.

It is a constitutional provision that "no money shall be drawn from the Treasury but in consequence of appropriations made by law." The palpable object of this provision is to prevent the expenditure of the public money, for any purpose whatsoever, which shall not have been first approved by the Representatives of the People and the States in Congress assembled. It vests the power of declaring for what purposes the public money shall be expended, in the legislative department of the government, to the exclusion of the executive and judicial, and it is not within the constitutional authority of either of those departments, to pay it away without law, or to sanction its payment. According to this plain constitutional provision the claim of the Bank can never be paid without an appropriation by act of Congress. But the Bank has never asked for an appropriation. It attempts to defeat the provision of the constitution, and obtain payment without an act of Congress. Instead of awaiting an appropriation passed by both Houses, and approved by the President, it makes an appropriation for itself, and invites an appeal to the judiciary to sanction it. That the money had not technically been paid into the Treasury, does not affect the principle intended to be established by the constitution. The Executive and Judiciary have as little right to appropriate and expend the public money without authority of law, before it is placed to the credit of the Treasurer, as to take it from the Treasury. In the annual report of the Secretary of the Treasury, and in his correspondence with the President of the Bank, and the opinion of the Attorney General accomp nying it, you will find a further examination of the claims of the bank, and the course it has pursued.

It seems due to the safety of the public funds remaining in that Bank, and to the honor of the American People, that measures be taken to separate the Government entirely from an institution so mischievous to the public prosperity, and so regardless of the Constitution and laws. By transferring the public deposites, by appointing other Pension Agents, as far as it had the power, by ordering the discontinuance of the receipt of Bank checks in payment of the public dues after the first day of January next, the executive has exerted all its lawful authority to sever the connexion between the Government and this faithless corporation.

The high-handed career of this institution imposes upon the constitutional functionaries of this Government, duties of the gravest and most imperative character—duties which they cannot avoid, and from which I trust there will be no inclination on the part of any of them to shrink. My own sense of them is most clear, as is also my readiness to discharge those which may rightfully fall on me. To continue any business relations with the Bank of the United States that may be avoided without a violation of the national faith, after that institution has set at open defiance the conceded right of the Government to examine its affairs, after it has done all in its power to deride the public authority in other respects, and to bring it into disrepute at home and abroad; after it has attempted to defeat the clearly expressed will of the people by turning against them the immense power intrusted to its hands, and by involving a country otherwise peaceful, flourishing, and happy, in dissentions, embarrassment, and distress—would make the nation itself a party to the degradation so seduously prepared for its public agents—and do much to destroy the confidence of mankind in popular governments, and to bring into contempt their authority and efficiency. In guarding against an evil of such magnitude, considerations of temporary convenience should be thrown out of the question, and we should be influenced by such motives only as look to the honor and preservation of the republican system. Deeply and solemnly impressed with the justice of these views, I feel it to be my duty to recommend to you, that a law be passed authorizing the sale of the public stock; that the provision of the charter requiring the receipt of notes of the Bank in payment of public dues, shall, in accordance with the power reserved to Congress in the 14th Section of the charter, be suspended until the Bank pays to the Treasury the dividends withheld; and that all laws connecting the Government or its officers with the Bank, directly or indirectly, be repealed; and that the institution be left hereafter to its own resources and means.

Events have satisfied my mind, and I think the minds of the American People, that the mischiefs and dangers which flow from a National Bank far overbalance all its advantages. The bold effort the present Bank has made to control the Government, the distresses it has wantonly produced, the violence of which it has been the occasion in one of our cities famed for its observance of law and order, are but premonitions of the fate which awaits the American people, should they be deluded into a perpetuation of this institution, or the establishment of another like it. It is fervently hoped, that, thus admonished, those who have heretofore favored the establishment of a substitute for the present bank, will be induced to abandon it, as it is evidently better to incur any inconvenience that may be reasonably expected, than to concentrate the whole monied power of the Republic in any form whatsoever, or under any restrictions.

Happily it is already illustrated that the agency of such an institution is not necessary to the fiscal operations of the Government. The State Banks are found fully adequate to the performance of all services which were required of the Bank of the United States, quite as promptly, and with the same cheapness. They have maintained themselves, and discharged all these duties, while the Bank of the United States was still powerful, and in the field as an open enemy: and it is not possible to conceive that they will find greater difficulties in their operations, when that enemy shall cease to exist.

The attention of Congress is earnestly invited to the regulation of the deposits in the State Banks, by law. Although the power now exercised by the Executive Department in this behalf, is only such as was uniformly exerted through every Administration from the origin of the Government up to the establishment of the present Bank, yet, it is one which is suspectible of regulation by law, and, therefore, ought so to be regulated. The power of Congress to direct in what places the Treasurer shall keep the moneys n the Treasury, and to impose restrictions upon the Executive authority in relation to their custody and removal, is unlimited, and its exercise will rather be courted than discouraged by those public officers and agents on whom rests the responsibility for their safety. It is desirable that as little power as possible should be left to the President or Secretary of the Treasury over those institutions—which, being thus freed from Executive influence, and without a common head to direct their operations, would have neither the temptation nor the ability to interfere in the political conflicts of the country. Not deriving their charters from the national authorities, they would never have those inducements to meddle in general elections, which have led the Bank of the United States to agitate and convulse the country for upwards of two years.

The progress of our gold coinage is creditable to the officers of the mint, and promises in a short period to furnish the country with a sound and portable currency, which will much diminish the inconvenience to travellers of the want of a general paper currency, should the State banks be incapable of furnishing it. Those institutions have already shown themselves competent to purchase and furnish domestic exchange for the convenience of trade, at reasonable rates, and not a doubt is entertained that, in a short period, all the wants of the country in bank accommodations and exchange will be supplied as promptly and cheaply as they have heretofore been by the Bank of the United States. If the several States shall be induced gradually to reform their banking systems, and prohibit the issues of all small notes, we shall, in a few years, have a currency as sound, and as little liable to fluctuations, as any other commercial country.

The report of the Secretary of War, together with the accompanying documents from the several bureaux of that Department, will exhibit the situation of the various objects committed to its administration.

No event has occurred since your last session rendering necessary the movements of the army, with the exception of the expedition of the regiment of dragoons into the territory of the wandering and predatory tribes inhabiting the western frontier, and living adjacent to the Mexican boundary. These tribes have been heretofore known to us principally by their attacks upon our own citizens and upon other Indians entitled to the protection of the United States. It became necessary for the peace of the frontiers to check these habitual inroads, and I am happy to inform you that the object has been effected without the commission of any act of hostility. Col. Dodge, and the troops under his command, have acted with equal firmness, and an arrangement has been made with those Indians, which it is boped will assure their permanent pacific relations with the United States and the other tribes of Indians upon that border. It is to be regretted that the prevalence of sickness in that quarter has deprived the country of a number of valuable lives, and particularly that General Leavenworth, an officer well known and esteemed for his gallant services in the late war, and for his subsequent good conduct, has fallen a victim to his zeal and exertions in the discharge of his duty.

The army is in a high state of discipline. Its moral condition, so far as that is known here, is good, and the various branches of the public service are carefully attended to. It is amply sufficient, under its present organization, for providing the necessary garrisons for the sea board and for the defence of the internal frontier, and also for preserving the elements of military knowledge, and for keeping pace with those improvements which modern experience is continually making. And those objects appear to me to embrace all the legitimate purposes for which a permanent military force should be maintained in our country. The lessons of history teach us its danger, and the tendency which exists to an increase. This can be best met and averted by a just caution on the part of the public itself, and of those who represent them in Congress. [See page 764.]

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NOVEMBER 29—DECEMBER 5, 1834.

LITERARY NOTICES.

THE INFLUENCE OF MORAL CAUSES UPON OPINION, SCIENCE, AND LITERATURE: BY G. C. VERPLANCK, L. L. D. Amherst College. New York: *H. Ludwig.*—This is a discourse delivered by Mr. Verplanck before the Literary Societies of Amherst College, and at their request in August last. It treats of high matters in a high and worthy strain; and if its counsels be as advisedly acted on as they are eloquently enforced, they cannot fail to produce public benefit, while conferring individual happiness and renown.

The sudy of Truth is the great lesson inculcated throughout these pages—and the dictum alike wise and true, that "the Creator seems to have ordained a connexion between Truth and Goodness, so that as Truth is the natural teacher of Goodness, Goodness again is the surest guide to Truth," is enforced by the analogy of nature and the harmony of the universe, as well as by the adaptation of the moral nature of man to his physical condition.

To Truth, sought in the spirit of humility—sought as Newton sought it, not for victory, but with an enduring and patient spirit, desiring to arrive at that knowledge, which is not only Power but Virtue—how fine a tribute is paid in the following extract:

The implicit devotion to truth is not only a positive virtue in itself, but it includes or implies many others. It implies, of course, if not an entire exemption from the malignant, envious, and selfish vices, at least the power of perceiving them in our own breasts, and of bringing them into subjection to reasonand conscience whenever they impede the right exercise of the judgment. It implies also the possession and practice of several distinct and positive virtues. That patience of labor and endurance of disappointment, such as, in the active concerns of life, preserve the even balance of the faculties, fit them to all the duties of society, and bear the possessor steadily over the tossing billows of adversity, are also the great secret of scientific acquirement and discovery. It was in this alone that the meek-spirited Newton felt and confessed his superiority to common men. It was this unpretending virtue that gave energy and success to his unrivalled mathematical sagacity, and that combined the gigantic powers of his reason and invention with a laborious and unrivalled minuteness of observation and experiment. This virtue may be sometimes the offspring of an enthusiastic love of knowledge; but it is then most perfect and most beautiful when it grows up, side by side, and from the same root, with its twin virtue of Humility. The impatience of long-sustained attention, the avidity for plausible hypothesis, the disregard for facts that militate against favorite theories, are all of them the natural fruits of proud self-confidence. It is this inflated vanity that so often induces the moral or political reasoner to rear his theory upon so slight a foundation of reality, and when it is once reared, to repose so complacently upon his fancied laurels, or to rouse himself from his flattering dreams, only to heap scorn and obloquy upon the heads of those who oppose or who doubt. On the contrary, it is the deep felt sense, the familiar and intimate conviction, that man is but darkly and imperfectly wise, whilst nature is great, and its Creator infinite, that prepare the mind for laborious study and patient inquiry—for the ready sacrifice of long-cherished notions and of fancied learning—for the prostration and subjection of the whole man to truth, and to truth alone. But from this very lowliness springs up another, and an opposite, yet not contradictory virtue. It is that of manly independence of judgment. For, the truth, once found, is acknowledged without a rival, and estimated as above all price. What is it to such a meek but sincere inquirer, that the fashion of the world is against him—that grave authority frowns upon him—that old familiar friends denounce his motives, his judgment, or his character! He has sought for a better good than they or theirs can bestow, and he has gained it. He has labored to learn that which would make him wiser and better, and others happier.—That knowledge has seized upon his intellect and his affections as with a giant's grasp. It has entered into his soul as a beam of living light. There is no place left there for the creeping things of darkness, for fear, for selfishness, for vanity, for false shame. He knows that the fabric of his belief is firm and solid; for its rests on the deep and low foundation of an humble, and therefore a true estimation of himself.—Founded as it is on the rock of humility, built up by patient industry, the breath of popular favor or censure passes by it unheeded, and the tempest of persecution beats on it in vain.

We must ask attention to another extract, which treats, almost too leniently, and yet with much skill, the dangerous dogma which would divest human belief of all moral character and responsibility, by teaching that it is wholly involuntary:

There is a dogma taught in some schools of metaphysics, that belief is wholly involuntary; and that as opinions must depend entirely upon the reasons presented to the mind's consideration, they can have no moral character, good or evil. If this doctrine be true, it would seem to follow, that belief and opinion must be just as independent of all moral influences in their origin and formation, as they are in their issue and character. This is a dogma that has passed from the books and schools of philosophy to the forum and the senate, furnished argument for the grave review and the popular harangue, and has served as the foundation of reasoning and declamation, sometimes in the cause of sceptical indifference, and sometimes, better employed, in the service of toleration and equal laws. It contains a remarkable mixture of truth and error, and the limits of each are indicated and well defined by the purposes to which the doctrine has been applied, and by the consequences deduced from it. As applied to enforce a liberal and just tolerance of sentiment towards difference of faith or opinion, it points out correctly the numerous sources of innocent error, from some one or other of which no mind can be wholly exempt.—there are the errors of involuntary ignorance; there are those springing from ideas early instilled by education, and strengthened by youthful associations—unfounded, unexamined, it may probably be—unsuspected, but yet inwrought deeply into our dearest sympathies and best affections; there are errors from erroneous information, and facts believed on authority respectable in itself, or venerable in our eyes from gratitude or love, from custom or prejudice; errors, again, arising from the peculiar personal character of the individual, his turn of thought, his capacity for reasoning, his desires, appetites, habits, his very physical constitution, and circumstances in life.—Thus it may often happen that the mixture and association of the best sentiments and the most essential truths with baser materials, are often as real and as excusable causes of error as perfectly involuntary ignorance. Involuntary ignorance, moreover, in a being so limited as individual man, whilst the collective knowledge and the pressing duties of his species are so vast, is by no means confined to the least informed portions of society. It may be found where it is least expected, and often in company with large acquisitions in other respects. As, then, correct deductions can be drawn only from the facts and arguments actually comprehended by the mind, error may thus be pardonable, be innocent, be virtuous. In the honest language of the sternest and most uncompromising of modern controversialists,* "though truth can be but on one side, sincerity may be on both." Such is the lesson of tolerance for his fellows, that the contemplation of man's weakness and fallibility ought to teach him. But a closer inspection of our own minds and hearts will show us yet other principles at work in the formation of opinion, always operating upon such opinious as are connected with the conduct and business of life, or the regulation of the heart and the desires—often affecting the speculative reason, and sometimes even the observations and conclusions of physical philosophy. The mind has a strange capacity of deceiving itself, as to what is, or is not, the just inference from the evidence within its reach. It can willfully turn away altogether from the most important considerations, or pass them over with a slight and careless glance. It can fasten its whole or its chief attention upon some single point favorable to its own preconceived notions, to the party it has espoused, to its accidental loves, or hates, or caprices. It can deceive itself by resting implicitly upon some single strong and easily comprehended argument, on the one side; whilst it impatiently turns away from the far stronger opposing demonstration that results from a numerous and complicated, but united authority of facts and reasons. It can view things, not as they appear in the clear, colourless ray of reason, but as they show discoloured by interest, prejudice, or ridicule, according as the fashion of the world throws upon them the many changing colors of its ever-turning prism. It can acquiesce in the first plausible conclusions that may coincide with the interests or the fancies of the individual, and resolve to think no further. It can obstinately shrink back from the painful task of unsettling early opinions, and plucking up maxims and doctrines that have been implanted early, and have entwined their roots with every fibre. The prejudiced individual may (to borrow the Baconian imagery) obstinately refuse to look forth into the broad day light, and perversely form his judgment of all things from those dim shadows that flit across the darkened cavern of his intellect, where he has erected the shrine of the idol of his secret worship, upon whose altars sometimes truth and sometimes virtue is the the sacrifice. Facts may be assumed upon authority, without investigation, because we wish them to be true, and would rather take them as such, than undergo the labor of examination, with the hazard of enduring the mortification of finding them refuted. Nay more, experience has a thousand times shown, what otherwise would seem incredible, that when the strongest and clearest evidence has been forced upon the mind, its power can be completely deadened and resisted by mere habit, or pure mental indolence. Above all, words mere words, may be taken without ever weighing their real meaning, or considering whether they have any meaning at all, and pass so current for realities, that thus a man may go through life in the loud and fervent profession of doctrines or facts, without the slightest suspicion that he is utterly ignorant of what those facts or doctrines may be—without realizing them in any actual application to nature or life, and, it may be, in the daily contradictien of his personal conduct to the words constantly upon his tongue. Thus it is, in another view of the question, that error may be very far from guiltless; that the moral faculties have much to do in the formation of opinion and the discovery of truth. From all this it follows, that the true philosophy of the laws of belief, on the one hand, bids us beware of too hasty and confident a reliance on our own judgment, and, still more, of rash scorn for the minds, or hatred for the persons, of those who range themselves under opposing banners to our own on the great questions which divide society; whilst, on the other side, it teaches us no less imperatively that we are morally accountable for the right operations of our intellect, and the proper use of the means of ascertaining truth, placed within our reach.

* Horsley.

We had marked further passages from this finely-wrought address, but are compelled to exclude them to-day, though we would draw attention to the brief and original view taken of the influence which, in this country particularly, moral causes should exert upon the genius and works of pure literature.

A GENERAL HISTORY OF QUADRUPEDS, embellished with three hundred and forty-four engravings, from the original of *T. Bewith*, by *A. Anderson*. 1 vol.—New York: J. BOOTH & SON.—This purports to be the second American from the eighth London edition, and is a very attractive book for young persons, by the cuts, which are quite good, and the biographies of the animals—among which the dog figures, as he should, pre-eminently. There are a few additions of American animals, such as the Mammoth, the Grisly Bear, &c., with authentic notices of each.

THE AMERICAN FOREST, OR UNCLE PHILIP'S CONVERSATIONS WITH THE CHILDREN ABOUT THE TREES OF AMERICA; HARPER & BROTHERS, New York: forming vol. XXII. of the *Boys and Girl's Library of Useful and Entertaining Knowledge.*—Uncle Philip has unquestionably the gift—rare as it is valuable—of so imparting instruction as to make the pursuit of knowledge a pleasure rather than a task.

Uncle Philip has another characteristic for which we greatly commend him, that of making his books, wherever the subject will admit of it, conduce to inspire in American children and youth a desire to be well informed in all that relates to America.

Such is the little volume now before us, which treats about the trees of America—and in the shape of beguiling conversation and amusing anecdote, imparts knowledge at once useful and ornamental.

There is not one of the books from Uncle Philip's pen that might not be introduced, with great profit to

learners, as regular school books. The style is pure and plain, the information accurate, and the spirit always devout. We could not wish any thing better to masters or scholars, than that these books should be familiar in their hands.

THE NEW ENGLAND MAGAZINE, No. XLII, FOR DECEMBER.—This is a good number of this popular Magazine; and it contains besides its usual variety, one or two papers, to which we shall take pleasure in calling the attention of our readers hereafter.

POPULAR ESSAYS ON THE LAWS OF ACOUSTICS: by Joseph Togne, M. D. Philadelphia.—This is a small pamphlet, which treats of the anatomy and physiology of the ear, and recommends itself to persons afflicted with deafness, by adducing seventy-seven cases of the removal of that infirmity, by a mode of treatment based on the principles advanced in the treatise.

REPUBLICATION OF THE LONDON, EDINBURGH, FOREIGN AND WESTMINSTER QUARTERLY REVIEWS.—This is indeed a cheap medieum of coming at the writings of the best living critics and essayists of England. The works here embodied in one publication, embrace nearly the whole field of politics and literature. We conclude to-day's review with the following extracts from the number before us: they are taken from an article in relation to the Jacobites, based upon the recently published Memoirs of the Rebellion of 1745; by Robert Chambers."

The species of canine fidelity which actuated many of the adherents of Charles Edward, has been admired by romance-writers; it has indeed a claim to be among the first of savage virtues,—of those virtues, which are not founded upon any kind of reasoning, but are parts of the constitution of the human animal. In other words, when human beings are totally uncivilized, the presance of such a feeling, like the instinct of a dog, serves as something on the operation of which a fellow being can calculate, or in which he can repose trust. The reflections of these people on the hardships to which Charles was personally subjected as the natural consequence of his attempt, are among the most characteristic and innocent operations of this feeling.—In their eyes he was not only suffering injustice, he was not merely deprived of that piece of property to which he had a right;—an infraction an inexplicable infraction of the laws of nature had been committed, and they were as much astonished at the slight of hand transacted before them, as the Hindoo when he sees snow, or Galileo when he found nature indulging in a vacunm, after having disallowed it for four and-thirty feet. They saw the man filthy and in rags, reclining on a bleak hill, who ought to have been glittering in diamonds and reposing on the people, as their ballads frequently expressed, and as their novelists have repeated:—

> 'There did our young Prince lie down,
> Whose home should have been a Palace.'

It is to the same prinsiple, tinged perhaps with a feeling of a somewhat nobler order, that is owing the fact, honorable to the constancy of the poor to their creed, that a reward for Charles's head, sufficient to have enriched a district, was never competed for.

But the adherence to divine right was not the only circumstance calculated upon in this insurrection: a dazzling perspective of Dukedoms and Marquisates, made the motives of many of the adherents resemble those of their leaders. In England there existed a party of Jacobites; some of whom considered themselves of that creed by hereditary right, while others connected with the original body of patriots' who harrassed Walpole, finding themselves disappointed of office by Pulteney and Pelham, looked to the returnof the banished family, as among other chances, one very likely to turn out in their favor.—Their chance, however, depended on the Pretender's coming over with a tolerable force; but he came alone, and therefore they were prudently silent.*

* It is generally understood that the Stuart papers, at present in the hands of the Britsh government, throw a strange light on the motives of the representatives of many noble houses at this period. It is disgraceful to the persons to whom they are committed, that these papers are not published; but perhaps they would exhibit in too true colors the acts of hereditary aristocracy.

Scotland was at that time in a different situation.—One part of it was cut off from the laws; and the whole country when placed in juxtaposition with England felt itself poor. The poverty of Scotland at that period has generally been accounted for the removal of the Court. To a City of lackies the removal of a court is the abstraction of the daily bread of the community; but to a country of agriculturists and manufacturers, it is a good riddance. The poverty of Scotland arose not from the removal of one great court, but from the existence of many petty ones,—especially in that part which has been noticed as beyond the pale of laws. The consequence of the existence of heritable jurisdictions, was that each man, instead of gaining his livelihood as he thought best by his own industry, got his living from his chief, and gave his obedience in return. Independently of the moral influence of this state of society, the chiefs were left to the exercise of considerable terror over their slaves.

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It would appear from the collection that some of Cumberland's officers were not more accomplished in kicking than in pillaging. A lady provides an auction roll looking document, which she unceremoniously entitles 'Copy of a list of what General Hawley took from me when I lent him my house at Aberdeen.' The list is very distinct and particular in the enumeration, and design 'One set colored table china, viz ten dishes, a soup dish, and four dozen and ten plates.' The General seems to have had an eye after both the useful and the ornamental. The list proceeds to enumerate 'Many dusting cloths, for he left none. An embroidered fire-screen. A repeating clock with the stand for it, which stood by the bed in which he lay. All the books. Three flutes, and music books. Twe canes with ivory heads. Two maps. A large marble mortar and pestle. A very big copper fish-kettle with a fish drainer in it. Several larding pins, and a dozen of iron skewers.' The lady so pillaged, writes an account of the circumstances to her sister. It appears from the terms used that she was an Englishwoman.

"That you my dear Mrs. Bowdler, Miss Harriott, and my brother, have been all very much astonished at not having for so long a time heard from me, (especially as I have had several kind letters from you all,) I verily believe; but what is worse, the reading of this will give you and all my friends great concern, and surprize you very much, when I shall tell you that the day before the Duke of Cumberland came here, which was the 22d of February, Colonel Watson, one of General Hawley's aid-de-camps, my neighbor Mr. Thomson, and Provost Robinson, came to me and said that the College, which was designed for the Duke, was not found convenient, and that my house and Mr. Thomson's, was what they must have. It was no difficulty for Mr. Thomson to find a place to go to, because all his and his wife's relations live here, but that was not my case; however, those gentlemen told me that when I had found a place to put myself in, all the difficulty was over, for as to every thing that was in the house, greater care would be taken of it than of any other: for I might and ought to depend on it, that as I lent my house for their convenience, they would not let me be a sufferer in any respect; that as to my china and linen I must lock it up, and put my kitchen furniture in the cellar, that it might not be in their way, and lock them, only leaving them a place for their coals, and two maids in the house to do any thing for them, and make myself quite easy, for they would not stay above two or three days here. * * * The very next morning after they came, before I was out of my bed, General Hawley sent two messengers, to command me to send him every key I had, and so I did, still thinking that when he had satisfied his curiosity, he would send them to me again; but about six o'clock in the afternoon, he sent one of his aide camps to me, (whose name is Wolf),' [The editor states that he has ascertained this person to have been distinct from the officer that was afterwards the celebrated General Wolfe,] 'who after telling me rudely enough, that he had a great deal of trouble to find me out, said, that he was come to let me know, that by the Duke and General Hawley's orders, I was to be deprived of every thing I had but the clothes on my back. Do not wonder that I thought this an uncommon hard sentence, for I am very sure that I never either said or did any thing that could offend any of them, or any of the inhabitants of the place. The gentleman told me, that indeed the General had been very strict in his inquiries about me, but he could not find any thing to lay to my charge. The next day, there was a petition read to the Duke, setting forth the cruelty of this sentence, and desiring that at least I might have my clothes belonging to myself and my child, with my provisions, with what I could make plainly appear belonged entirely to me or other people. It was said he seemed quite amazed at it, and said he would take care that I should not be robbed; and indeed the said gentleman came to me again, and said the Duke had ordered that my things should not be taken from me, so I thought I might depend on this message; but General Hawley, who lived in my house, took care to prevent that, for he packed up every bit of China I had, which I am sure would not be bought for two hundred pounds, all my bedding and table linen, every book, my repeating clock, which stood by the bed in which he lay every night, my worked screen, every rag of Mr. Gordon's clothes, the very hat, breeches, night-gown, shoes, and what shirts there was of the child's, twelve teaspoons, strainer, and tongs, the jappanned board on which the chocolate and coffee-cups stood, and put them on board a ship in the night time, directed to himself at Holyrood house at Edinburgh."

The unfortunate writer after making a further doleful enumeration continues—

"I have sent to my landlord to desire him to take his house off my hands, for it is left in such a way that it is impossible for me to go into it again, nor am I any longer in a condition to keep it I am putting away Bob's master and Appy."

This is the same General Hawley who rendered himself celebrated for the eccentric terms of his will, which, after observing, aptly enough it would appear, "As I began the world with nothing, and as all I have is of my own acquiring, I can dispose of it as I please," terminated with these words—"In witness whereof, I have hereunto set my hand and seal, having writ it all with my own hand, and signed each page; and this I did, because I hate all priests of all professions, and I have the worst opinion of all members of the law."

As a converse to this, see what Lord George Murray, Charles's Commander in Chief, says of his army—

"As to plundering, our men were not entirely free of it; but there was much less of this than could have been expected, and few regular armies but are as guilty. To be sure there was some noted thieves amongst the Highlanders, (those called our Huzzars were not better;) what army is without them? But all possible care was taken to restrain them. How often have I gone into houses on our marches, to drive the men out of them, and drubbed them heartily. I was even reproved for correcting them. It was told me that all the Highlanders were gentlemen, and never to be beat; but I was well acquainted with their tempers. Fear was as necessary as love, to restrain the bad and keep them in order."

A considerable portion of this collection consists of accounts of the barbarities after Culloden. There is no doubt that these were dreadful. The government side has been silent on the subject; but after making allowance for the exaggeration of party, there cannot be much doubt that the numerous narratives given from different sources in this collection, are in the leading particulars too surely true. They are wearisomely disgusting, and there is scarcely a passage within a hundred pages which it is not revolting to read. Perhaps it might interest the members of the Church of England, to find the Episcopal party the subjects of proscription, and the Presbyterians zealously following Scripture in visiting the sins of the fathers upon the children until the third and fourth generation. There are scarcely grounds for ascertaining the feelings of the individual whose ambition caused so much ruin, and in the absence of proof it would be unfair to decide; but a member of his own party, Dr. King, in his anecdotes, seems to lean against him when he says—"I never heard him express any noble or benevolent sentiment, the certain indications of a great soul and good heart; or discover any sorrow or compassion for the misfortune of so many worthy men who had suffered in his cause."

After these bloody details, a string of accounts of the "Prince's Wanderings and Escapes" will only interest the writers of romances. Such instances as the following, are specimens of princely ingenuity, which it may do no harm to those who may be in danger of being deprived of the occupation of governing nations, to read—

"Donald MacLeod said the Prince used to smoke a great deal of tobacco: and, as in his wanderings from place to place, the pipes behoved to break, and turn into short cuttles, he used to take quills, and putting one into another, 'and all,' said Donald, 'into the end of the cuttie, this served to make it long enough, and the tobacco to smoke cool." Donald added, that he never knew in all his life, any one better at finding out a shift than the Prince was, when

he happened to be at a pinch; and that the Prince would sometimes sing them a song to keep up their hearts."

PRESIDENT'S MESSAGE—continued from p. 761.

From the duties which devolve on the Engineer Department, and upon the Topographical Engineers, a different organization seems to be demanded by the public interest, and I recommend the subject to your consideration.

No important change has, during this season, taken place in the condition of the Indians. Arrangements are in progress for the removal of the Creeks, and will be soon for the removal of the Seminoles.—I regret that the Cherokees east of the Mississippi have not yet determined, as a community, to remove. How long the personal causes which have heretofore retarded that ultimately inevitable measure, will continue to operate, I am unable to conjecture. It is certain, however, that delay will bring with it accumulated evils, which will render their condition more and more unpleasant. The experience of every year adds to the conviction, that emigration, and that alone, can preserve from destruction the remnant of the tribes yet living among us. The facility with which the necessaries of life are procured, and the treaty stipulations providing aid for the emigrant Indians in their agricultural pursuits, and in the important concern of education, and their removal from those causes which have heretofore depressed all and destroyed many of the tribes, cannot fail to stimulate their exertions and reward their industry.

The two laws passed at the last session of Congress on the subject of the Indian affairs, have been carried into effect, and detailed instructions for their administration have been given. It will be seen by the estimates for the present session, that a great reduction will take place in the expenditures of the department in consequence of these laws. And there is reason to believe that their operation will be salutary, and that the colonization of the Indians on the western frontier, together with a judicious system of administration, will still further rednce the expenses of this branch of the public service, and at the same time promote its usefulness and efficiency.

Circumstances have been developed, showing the existence of extensive frauds under the various laws granting pensions and gratuities for Revolutionary services. It is impossible to estimate the amount which may have been thus fraudulently obtained from the national treasury. I am satisfied, however, it has been such as to justify a re-examination of the system, and the adoption of the necessary checks in its administration. All will agree, that the services and sufferings of the remnant of our Revolutionary band, should be fully compensated. But while this is done, every proper precaution should be taken to prevent the admission of fabricated and fraudulent claims. In the present mode of proceeding, the attestations and certificates of judicial officers of the various States, form a considerable portion of the checks which are interposed against the commission of frauds. These, however, have been, and may be, fabricated, and in such a way as to elude detection at the examining offices. And independently of this practical difficulty, it is ascertained that these documents are often loosely granted; sometimes, even bank certificates have been issued; sometimes prepared papers have been signed without inquiry; and, in one instance at least, the seal of the court has been within reach of a person most interested in its improper application.

It is obvious that, under such circumstances, no severity of administration can check the abuse of the law; and information has, from time, been communicated to the Pension Office, questioning or denying the right of persons placed upon the pension list to the bounty of the country. Such cautions are always attended to and examined. But a far more general investigation is called for; and I therefore recommend, in conformity with the suggestion of the Secretary of War, that an actual inspection should be made in each State, into the circumstances and claims of every person now drawing a pension. The honest veteran has nothing to fear from such a scrutiny, while the fraudulent claimant will be detected, and the public treasury relieved to an amount, I have reason to believe, far greater than has heretofore been suspected. The details of such a plan could be so regulated as to interpose the necessary checks, without any burthensome operation upon the pensioners. The object should be two-fold—

1. To look into the original justice of the claims, so far as this can be done under a proper system of regulations, by an examination of the claimants themselves, and by inquiring, in the vicinity of their residence, into their history, and into the opinion entertained of their revolutionary services.

2. To ascertain, in all cases. whether the original claimant is living, and this by actual peersonal inspection.

This measure will, if adopted, be productive, I think, of the desired results, and I therefore recommend it to your consideration, with the further suggestion, that all payments should be suspended till the necessary reports are received.

It will be seen by a tabular statement annexed to the documents transmitted to Congress, that the appropriations for objects connected with the War Department, made at the last session, for the service of the year 1834, excluding the permanent appropriations for the payment of military gratuities under the act of Juue 8, 1832, the appropriation of two hundred thousand dollars for arming and equipping the militia, and the appropriation of ten thousand dollars for the civilization of the Indians, which are not annually renewed, amounted to the sum of nine millions three thousand two hnndred and sixty-one dollars, and that the estimates of appropriations necessary for the same branches of service for the year 1835, amount to the sum of five millions seven hundred and seventy-eight thousand nine hundred and sixty-four dollars, making a difference in the appropriations of the current year over the estimates of appropriation for the next, of three millions two hundred and twenty-four thousand two hundred and ninety-seven dollars.

The principal causes which have operated at this time to produce this great difference, are shown in the reports and documents, and in the detailed estimates. Some of these causes are accidental and temporary, while others are permanent, and aided by a just course of administration, may contine to operate beneficially upon the public expenditures.

A just economy, expending where the public service requires, and withholding where it does not, is among the indispensable duties of the Government.

I refer yon to the accompanyiug report of the Secretary of the Navy, and to the documents with it, for a full view of the operations of that important branch of our service, during the present year. It will be seen that the wisdom and liberality with which Congress have provided for the gradual increase of our navy material, have been seconded by a corresponding zeal and fidelity on the part of those to whom has been confided the execution of the laws on the subject, and that but a short period would be now required to put in commission a force large enough for any exigency into which the country may be thrown.

When we reflect upon our position in relation to other nations, it must be apparent, that in the event of conflicts with them, we must look chiefly to our navy for the protection of our national rights.—The wide seas which separate us from other governments, must of necessity be the theatre on which an enemy will aim to assail us, and unless we are prepared to meet him on this element, we cannot be said to possess the power requisite to repel or prevent aggressions. We cannot, therefore, watch with too much attention this arm of our defence,or cherish with too much care any means by which it can possess the necessary efficiency and extension. To this end our policy has been hithertofore wisely directed to the constant employment of a force sufficient to guard our commerce,and to the rapid accumulation of the materials, which are necessary to repair our vessels, and construct with ease such new ones as may be required in a state of war.

In accordance with this policy, I recommend to your consideration the erection of the additional Dry Dock described by the Secretary of the Navy, and also the construction of the Steam Batteries to which he has referred, for the purpose of testing their efficacy as auxiliaries to the system of defence now in use.

The report of the Postmaster General, herewith exhibits the condition and prospects of that Department, at the commencement of the present year, beyond its available means, of three hundred and fifteen thousand five hundred and ninety-nine dollars and ninety-eight cents, which on the first of July last, had been reduced to two hundred and sixty-eight thousand ninety-two dollars and seventy-four cents. It appears also, that the revenues for the coming year, will exceed the expenditures about two hundred and seventy thousand dollars, which, with the excess of revenue which will result from the operations of the current half year, may be expected, independent of any increase in the gross amount of postages, to supply the entire deficit before the end of 1835. But as this calculation is based on the gross amount of postages which had accrued within the period embraced by the times of striking the balances, it is obvious that without a progressive increase in the amount of postages, the existing retrenchments must be persevered in through the year 1836, that the Department may accumulate a surplus fund sufficient to place it in a condition of perfect ease.

It will be observed that the revenues of the Post Office Department though they have increased, and their amount is above that of any former year, have yet fallen short of the estimates more than a hundred thousand dollars. This is attributed in a great degree to the increase of the free letters growing out of the extension and abuse of the frankiug privilege. There has been a gradual increase in the number of executive offices to which it has been granted; and by an act passed in March, 1833, it it was extended to members of Congress throughout the whole year. It is believed that a revision of the laws relative to the franking privilege, with some enactments to enforce more rigidly the restrictions under which it is granted, would operate beneficially to the country, by enabling the Department at an earlier period to restore the mail facilities that have been withdrawn, and to extend them more widely as the growing settlements of the country may require.

To a measure so important to the Government, and so just to our constituents, who ask ne exclusive privileges for themselves, and are not willing to concede them to others, I earnestly recommend the serious attention of Congress.

The importance of the Post Office Department, and the magnitude to which it has grown, both in its revenues and its operations, seem to demand its re-organization by law. The whole of its receipts and disbursements have hitherto been left entirely to Executive control, and individual discretion.—The principle is as sound in relation to this as to any other Department of the Government, that as little discretion should be confided to the Executive officer who controlls it, as is compatible with its efficiency. It is therefore earnestly recommended that it be organized with an Auditor and Treasurer of its own, appointed by the President and Senate, who shall be branches of the Treasury Department.

Your attention is again respectfully invited to the defect which exists in the Judicial System of the United States. Nothing can be more desirable than the uniform operations of the Federal Judiciary throughout the several States, all of which, standing on the same footing as members of the Union, have equal rights to the advantages and benefits resulting from its laws. The object is not attained by the judicial acts now in force, because they leave one fourth of the States without Circuit Courts.

It is undoubtedly the duty of Congress to place all the States on the same footing in this respect, either by the creation of an additional number of associate judges, or by an enlargement of the circuits assigned to those already appointed, so as to include the new States. Whatever may be the difficulty in a proper organization of the judicial system, so as to secure its efficiency and uniformity in all parts of the Union, and at the same time to avoid such an increase of judges as would incumber the supreme appellate tribunal, it should not be allowed to weigh against the great injustice which the present operation of the system produces.

I trust that I may be also pardoned for renewiug the recommendation I have so often submitted to your attention, in regard to the mode of electing the President and the Vice President of the United States. All the reflection I have been able to bestow upon the subject, increases my conviction that the best interests of the country will be promoted by the adoption of some plan which will secure, in all contingencies, that important right of sovereignty to the direct control of the People. Could this be attained, and the terms of those officers be limited to a single period of either four or six years, I think our liberties would possess an additional safeguard.

At your last session I called the attention of Congress to the destruction of the public building occupied by the Treasury Department. As the public interest requires that another building should be erected, with as little delay as possible, it is hoped that the means will be seasonably provided, and that they will be ample enough to authorize such an enlargement and improvement in the plan of the building as will more effectually accommodate the public officers, and secure the public documents deposited in it from the casualties of fire.

I have not been able to satisfy myself that the bill entitled "an Act to improve the navigation of the Wabash river," which was sent to me at the close of your last session, ought to pass, and I have therefore withheld from it my approval, and now return it to the Senate, the body in which it originated.

There can be no question connected with the administration of public affairs, more important or more difficult to be satisfactorily dealt with, than that which relates to the

rightful authority and proper action of the Federal Governments upon the subject of Internal Improvements. To inherent embarrassments have been added others resulting from the course of our legislation concerning it.

I have heretofore communicated freely with Congress upon this subject, and in adverting to it again, I cannot refrain from expressing my increased conviction of its extreme importance, as well in regard to its bearing upon the maintenance of the Constitution and the prudent management of the public revenue, as on account of its disturbing effect upon the harmony of the Union.

We are in no danger from violations of the Constitution by which encroachments are made upon the personal rights of the citizens. The sentence of condemnation long since pronounced by the American People upon acts of that character, will, I doubt not, continue to prove as salutary in its effects as it is irreversible in its nature. But against the danger of unconstitutional acts, which, instead of menacing the vengeance of offended authority, proffer local advantages, and bring in their train to the patronage of the Government, we are, I fear, not so safe. To suppose that because our Government has been instituted for the benefit of the People, it must therefore have the power to do whatever may seem to conduce to the public good, is an error, into which honest minds are too apt to fall. In yielding themselves to this fallacy, they overlook the great considerations on which the Federal Constitution was founded. They forget that in consequence of the conceded diversities in the interests and condition of the different States, it was foreseen, at the period of its adoption, that although a particular measure of the Government might be beneficial and proper in one State, it might be the reverse in another—that it was for this reason the States would not consent to make a grant to the Federal Government of the general and usual powers of Government, but of such only as were specifically enumerated, and the probable effects of which they could, as they thought, safely anticipate; and they forgot also the paramount obligation upon all to abide by the compact, then so solemnly, and, it was hoped, so firmly established. In addition to the dangers to the constitution springing from the sources I have stated, there has been one which was perhaps greater than all. I allude to the materials which this subject has afforded for sinister appeals to selfish feelings, and the opinion heretofore so extensively entertained of its adaptation to the purposes of personal ambition. With such stimulants it is not surprising that the acts and pretensions of the Federal Government in this behalf should sometimes have been carried to an alarming extent. The questions which have arisen upon this subject have related—

1st. To the power of making internal improvements within the limits of a State, with the right of territorial jurisdiction, sufficient at least for their preservation and use;

2d. To the right of appropriating money in aid of such works when carried on by a State, or by a company in virtue of State authority, surrendering the claim of jurisdiction; and

3d. To the propriety of appropriations for improvements of a particular class, viz. for light-houses, beacons, buoys, public piers, and for the removal of sand bars, sawyers, and other temporary and partial impediments in our navigable rivers and harbors.

The claims of power for the General Government upon each of these points certainly present matter of the deepest interest. The first is however of much the greatest importance, inasmuch as, in addition to the dangers of unequal and improvident expenditures of public moneys, common to all, there is superadded to that the conflicting jurisdictions of the respective governments. Federal jurisdiction, at least to the extent I have stated, has been justly regarded by its advocates as necessarily appurtenant to the power in question, if that exists by the constitution. That the most injurious conflicts would unavoidably arise between the respective jurisdictions of the state and federal governments, in the absence of a constitutional provision marking out their respective boundaries cannot be doubted. The local advantages to be obtained would induce the state to overlook in the beginning the dangers and difficulties to which they might ultimately be exposed. The powers exercised by the federal government would soon be regarded with jealousy by the state authorities, and originating as they must from implication or assumption, it would be impossible to affix to them certain and safe limits. Opportunities and temptations to the assumption of power incompatible with state sovereignty would be increased, and those barriers which resist the tendency of our system towards consolidation greatly weakened. The officers and agents of the general government might not always have the discretion to abstain from intermeddling with state concerns; and if they did they would not always escape the suspicion of having done so. Collisions, and consequent irritations would spring up,—that harmony which should ever exist between the general government and each member of the confederey, would be frequently interrupted—a spirit of contention would be engendered—and the dangers of division greatly multiplied.

Yet we all know that notwithstanding these grave objections, this dangerous doctrine was at one time apparently proceeding to its final establishment with fearful rapidity. The desire to embark the federal government in works of internal improvement, prevailed in the highest degree, during the first session of the first congress that I had the honor to meet in my present situation. When the bill authorising a subscription on the part of the United States for stock in the Maysville and Lexington Turnpike Companies, passed the two Houses, there had been reported, by the committees of Internal Improvement, bills containing appropriations for such objects, exclusive of those for the Cumberland road, and for harbors and light houses, to the amount of about one hundred and six millions of dollars. In this amount was included authority to the Secretary of the Treasury to subscribe for the stock of different companies to a great extent, and the residue was principally for the direct construction of roads by this government. In addition to these projects, which had been presented to the two Houses, under the sanction and recommendation of their respective committees on Internal Improvement, there were then still pending before the committees, and in memorials to Congress, presented, but not referred, different projects for works of a similar character, the expense of which cannot be estimated with certainty, but must have exceeded one hundred millions of dollars.

Regarding the bill authorising a subscription to the stock of the Maysville and Lexington Turnpike Company, as the entering wedge of a system which, however weak at first might soon became strong enough to rive the bands of the Union asunder, and believing that if its passage was acquiesced in by the Executive and the People, there would no longer be any limitation upon the authority of the General Government in respect to the appropriation of money for such objects, I deemed it an imperative duty to withhold from it the Executive approval. Although, from the obviously local character of that work, I might well have contented myself with a refusal to approve the bill upon that ground, yet, sensible of the vital importance of the subject, and anxious that my views and opinions in regard to the whole matter, should be fully understood by Congress, and my constituents, I felt it my duty to go further. I therefore embraced that early occasion to apprise Congress, that, in my opinion, the Constitution did not confer upon it the power to authorise the construction of ordinary roads and canals within the limits of a State, and to say, respectfully, that no bill admitting such a power could receive my official sanction. I did so in the confident expectation that the speedy settlement of the public mind upon the whole subject would be greatly facilitated by the difference between the two Houses and myself, and that the harmonious action of the several departments of the Federal Government in regard to it, would be ultimately secured.

So far as it regards this branch of the subject, my best hopes have been realized. Nearly four years have elapsed, and several sessions of Congress have intervened, and no attempt, within my recollection, has been made to induce Congress to exercise this power. The applications for the construction of roads and canals, which were formerly multiplied upon your files, are no longer presented; and we have good reason to infer that the current of public sentiment has become so decided against the pretension as effectually to discourage its re-assertion. So thinking, I derive the greatest satisfaction from the conviction, that thus much at least has been secured upon this important and embarrassing subject,

From attempts to appropriate the national funds to objects which are confessedly of a local character, we cannot, I trust, have any thing further to apprehend. My views in regard to the expediency of making appropriations for works which are claimed to be of a national character, and prosecuted under State authority, assuming that Congress have the right to do so, were stated in my annual message to Congress in 1830, and also in that containing my objections to the Maysville Road Bill.

So thoroughly convinced am I, that no such appropriations ought to be made by Congress, until a suitable constitutional provision is made upon the subject, and so essential do I regard the point to the highest interests of the country, that I could not consider myself as discharging my duty to my constituents in giving the Executive sanction to any bill containing such an appropriation. If the people of the United States desire that the public Treasury shall be resorted to for the means to prosecute such works, they will concur in an amendment of the Constitution, prescribing a rule by which the national character of the works is to be tested, and by which the greatest practical equality of benefits may be secured to each member of the confederacy. The effects of such a regulation would be most salutary in preventing unprofitable expenditure, in securing our legislation from the pernicious consequences of a scramble for the favors of Government, and in repressing the spirit of discontent which must inevitably arise from an unequal distribution of treasures which belong alike to all.

There is another class of appropriations for what may be called, without impropriety, internal improvements, which have always been regarded as standing upon different grounds from those to which I have referred. I allude to such as have for their object the improvement of our harbors, the removal of partial and temporary obstructions in our navigable rivers, for the facility and security of our foreign commerce. The grounds upon which I distinguish appropriations of this character from others have already been stated to Congress. I will now only add that at the first session of Congress under the new Constitution, it was provided by law, that all expenses which should accrue from and after the 15th day of August, 1789, in the necessary support and maintenance and repairs of all light houses, beacons, buoys, and public piers, erected, placed, or sunk before the passage of the act, within any bay, inlet, harbor, or port of the United States, for rendering the navigation thereof easy and safe, should be defrayed out of the Treasury of the United States; and further, that it should be the duty of the Secretary of the Treasury to provide by contracts, with the approbation of the President, for rebuilding when necessary and keeping in good repair the light houses, beacons, buoys, and public piers, in the several States, and for furnishing them with supplies. Appropriations for similar objects have been continued from that time to the present without interruption or dispute.

As a natural consequence of the increase and extension of our foreign commerce, ports of entry and delivery have been multiplied and established, not only upon our seaboard, but in the interior of the country, upon our lakes and navigable rivers. The convenience and safety of this commerce have led to the gradual extension of these expenditures; to the erection of lighthouses, the placing, planting, and sinking of buoys, beacons, and piers, and to the removal of partial and temporary obstructions in our navigable rivers, and in the harbors upon our great lakes, as well as on the seaboard. Although I have expressed to Congress my apprehension that these expenditures have sometimes been extravagant and disproportionate to the advantages to be derived from them, I have not felt it to be my duty to refuse my assent to bills containing them, and have contented myself to follow in this respect in the footsteps of all my predecessors. Sensible, however, from experience and observation, of the great abuses to which the unrestricted exercise of this authority by Congress was exposed, I have prescribed a limitation for the government of my own conduct, by which expenditures of this character are confined to places below the ports of entry and delivery established by law. I am very sensible that this restriction is not as satisfactory as could be desired, and that much embarrassment may be caused to the Executive Department in its execution, by appropriations for remote and not well understood objects. But as neither my own reflections, nor the lights which I may properly derive from other sources, have supplied me with a better, I shall continue to apply my best exertions to a faithful application of the rule upon which it is founded. I sincerely regret that I could not give my assent to the bill entitled "An act to improve the navigation of the Wabash river," but I could not have done so without receding from the ground which I have, upon the fullest consideration, taken upon this subject, and of which Congress has been heretofore apprized, and without throwing the subject again open to abuse, which no good citizen, entertaining my opinions, could desire.

I rely upon the intelligence and candor of my fellow-citizens, in whose liberal indulgence I have already so largely participated for a correct appreciation of my motives in interposing, as I have done, on this and other occasions checks to a course of legislation which, without in the slightest degree calling in question the motives of others, I consider as sanctioning improper and unconstitutional expenditures of public treasure.

I am not hostile to internal improvements, and wish to see them extended to every part of the country. But I am fully persuaded, if they are not commenced in proper manner, confined to proper objects, and conducted under an authority generally conceded to be rightful, that a successful prosecution of them cannot be reasonably expected. The attempt will meet with resistance where it might otherwise receive support, and instead of strengthening the bonds of our confederacy, it will only multiply and aggravate the cause of disunion.

ANDREW JACKSON.

December 1, 1834.

FOREIGN VARIETIES.

Metternich's System of Government.—The *Augsburgh Gazette* contains the following reflections, occasioned by the 25th Anniversary of Prince Metternich's elevation to the high office of Prime Minister of Austria:

"The Prince assumed the direction of the foreign relations of the vast Austrian empire a few days after the battle of Wagram, when the political opinions of Europe were in a state of total disorganization. On the 7th of October, three months later, the Prince was officially appointed to the same Department, for which he had shown himself singularly qualified. At this time the power of Napoleon was at its height, and he wished to form an alliance with the nation which he had made so many attempts to weaken. Napoleon was crowned with power and glory; his power extended from the Vistula to Cadiz—from the German Ocean to the extremity of Calabria. That formidable empire seemed then daily to become more consolid ted, and promised ages of domination to him and his posterity. Europe beheld with astonishment his rapid conquests, and the magic extension of his powor. A few profound observers, and amongst the number was Prince Metternich, discovered the secret of the weakness of the French.

"Gradually, circumstances, unforseen by the mass of mankind, brought about the overthrow of that gigantic empire. The legions which had penetrated to the Nile, and had marched in triumph from the Tagus to Russia, at last succumbed under the load of victories. Then Sovereigns and nations united in the most sacred bonds of brotherhood against the unprecedented favorite of fortune. The battle of Leipsic relieved Germany from the yoke which had pressed so heavily upon her. Her injured sons avenged the thousand wrongs she had received at the hands of the licentious French soldiery, and the capital of their late oppressors lay exposed to a deservedly terrible retribution.

"The Bourbons were restered to the throne of their ancestors, and, in an assembly of Sovereigns and statesmen, the most memorable in the history of the world, the affairs of Europe were brought back to their natural state. The nations were a second time thrown into alarm, and a second time they restored peace to the world. The man who had been the cause of so much bloodshed, so much misery, was consigned to a barren rock of the Atlantic, there to end his days, the prisoner of the nation which he most detested. The powers Europe were then left in peace to turn their attention towards their people.

"Spain became a prey to civil war, in changing a long-established system of government for one which she did not understand, and she found herself obliged to return to the former state of things. The attempt at innovation of to-day will have the same end, for the moral state of Spain will not allow of such ameliorations.

"Portugal founded an empire in the New World, and she herself is now the victim of revolutionary measures. France, after a repose of fifteen years, was hurried into the course which formerly proved so disastrous to herself and Europe. The day of the popular triumph was the day of her ruin; the illusions have vanished, and she is now fast retrograding. Italy attempted to follow the example of France, but happily for herself she did not succeed in bringing about her own destruction.

"Turkey, distracted by foreign and domestic feuds, has lost many of her fairest provinces. Her hitherto natural enemy has now become her friend, and will remain such. The interests of Russia are now closely allied to those of the Porte. The Emperor Alexander died covered with glory, deplored by his people, and esteemed and regretted by Europe. Constantine abdicated the throne in favor of his younger brother Nicholas, who trod the Hydra of revolution under his feet, and has lately succeeded in restoring peace to Poland.

"In this short space of time England has had her Castlereagh, Canning, Liverpool, and Grey. Each successive administration has been hesitating between the aristocracy and democracy; but the door of the revolution has at last been opened.

"In 1810 Austria found her herself in a most critical position. Since the taking of Paris, until the present hour, she has followed the same political system. Her power and influence have changed, it is true; but neither reproach nor praise has been able to induce her to abandon her principles.

"The country is happy in the enjoyment of the greatest plenty—the necessaries of life are cheap—and the people love their Emperor. The arts and sciences flourish, and commerce is in a flourishing state all over the empire; the credit of the Government is good, and order and tranquility reign everywhere.

"Austria has always shown herself the implacable enemy of reckless innovations. The device on her standard is 'Undoubted Right,' and every one will rally round it in case of need.

"This undeviating policy of 25 years is a rare political phenomenon. History will mention it in terms of the highest praise, and the name of Metternich will ever be associated with the persevering character of his system."

Firemen of Paris.—It is almost superfluous to state that there is in Paris, and indeed, in every town of France, a corps of firemen, who are denominated *sapeurs-pompiers*. The men composing it are in general, carpenters. Their full dress consists of a military blue coat, with red epaulettes, blue trousers, gaiters, and a brass helmet, surmounted by bear skin, and ornamented with a scarlet plume. When off guard the helmet is changed for a cocked hat. Besides being similarly trained, they are armed like the soldiers of the line, with the musket, bayonet, and *briquet* (a short cut-and-thrust-sword.) On summons to a fire the gorgeous helmet is put off, and replaced by a plain but serviceable brass casque, which guards the head against falling bricks, tiles or pieces of timber. The military coat is doffed, and a tight smart waistcoat with sleeves, substituted for it. If the fire be not of an extensive or very menacing character, three men only are told off from those on duty, and fly to the scene of action.—One of them bears an axe, a second a coil of rope, with hooks attached to it, the third a ladder. Of their knowledge, dexterty, activity and courage on arriving at the place where summoned, I shall not here stop to speak in the terms of eulogy, which on every occasion they merit, because the attempt would necessarily involve the discussion of the question whether or not their military habits do not conduce to their efficiency. At present I shall only add that every theatre, spectacle, and institution in Paris is day and night watched and guarded by one or more firemen, the number of them being always in proportion to the extent of the building or the hazard to which it is exposed. Besides the ordinary guard of firemen at every theatre in Paris, a reinforcement arrives an hour before the doors are opened, which is withdrawn an hour, I believe; after the termination of the performances. The well grounded sense of security with which the Parisian audiences regard the most flaming incidents on the stage is hence easily accounted for, and it is indeed well worth the cost it occasions. It is impossible to pass down the Rue de la Paix, at five o'clock on any day without being struck with admiration at the order, yet business like demeanour of the various detachments of firemen that at that hour issue from their barrack in that street, and proceed to their respective posts at the theatres. Even the houses of private individuals who give entertainments are placed for the moment under the safeguard of the nearest body or detachment of *sapeurs pompiers*. In the Palaces, Houses of Legislature, and indeed every great building belonging to the State, including the residences or hotels of the Ministers, firemen are ever present. Every man who has been in Paris is capable of dilating on the advantages that obviously result from the maintenance of such a conservative body as that of whch I speak—the *sapeurs-pompiers*. Its superiority in every thing (except perhaps the personal courage and devotion of the individuals) over the firemen of London requires not to those who have seen both to be demonstrated. The comparative absence of such a calamity as a fired dwelling house or other building in Paris is due, not so much to the solidity of the walls of the houses, as to the intelligence, sagacity, training, discipline, *sang froid*, and activity of the *sapeurs-pompiers*.—[Letter from Paris in the Morning Herald.]

Antiquities of Upper Peru.—In his very interesting *vive voce* communications to the meeting at Edinburgh, Mr. Pentland stated, that all about the lake Titicaca he had discovered innumerable tombs, hundreds of which he had entered and examined. The monuments were of a grand species of design and architecture, resembling Cyclopean remains and not unworthy of the arts of ancient Rome or Greece.—They therefore, betokened a high degree of civilization; but the most extraordinary fact belonging to them was their invariably containing the mortal remains of a race of men of all ages, from the earliest infancy to maturity and old age, the formation of whose *crania* seemed to prove that they were an extinct race of natives, who had inhabited Upper Peru above a thousand years ago, and differing from any mortals now inhabiting our globe.—The site is between 14 deg. and 19 deg. of north latitude, and the skulls found (of which specimens are both in London and Paris) are remerkable for their extreme exent behind the occipital foramen, insomuch that it could hardly be believed their owners could move in a perpendicular position.—For, two-thirds of the weight of the cerebral mass must have been deposited in this wonderfully elongated cerebellum; and as the bones of the face were also much elongated, the general appearance must have been rather that of some of the ape family than of human beings. In the tombs, as in those of Egypt parcels of grain were left inside the dead; and it was another singular circumstance, that the maize or Indian corn, so left, was different from any that now existed in the country. Mr. Pentland entered into details to show that the extraordinary forms thus brought to the light of day from their long sojourn could not be attributed to pressure, or any external force, similar to that still employed by many American tribes; and adduced, in confirmation of this view, the opinions of Cuvier, of Gall, and of many other celebrated naturalists and anatomists.—On these grounds he was of opinion, that they constituted the population of these elevated regions before the arrival of the present Indian population, which, in its physical characters, its customs, &c., offered many analogies with the Asiatic races of the old world.

Sincapore.—About ten P. M. on the 26th we anchored in Sincapore-roads; and upon the following day I landed and took up my residence, with my friend Mr. Bowstead. The island of Sincapore, at the part on which the settlement has been formed, has a very picturesque appearance, when seen from the ships at anchor in the roads, and does not prove less attractive to the stranger on landing; the government hill, with its neat bangalow and *flag-staff*, forms a prominent feature in the view; and the undulating character of the land, with the thickly timbered country in the distance, imparts a pleasing variety. Who can regard this settlement, so very recently established, yet now become a place of importance by the enterprise of British merchants, (almost unaided by any assistance from government,) without feeling how just the conclusion is, that commerce can elevate the most barren and unproductive spot to a place of high importance? Look at the magnificent private mansions, warehouses, and the extent of commerce, showing the present and increasing wealth of this rising settlement. The town is erected on the banks of a salt-water creek, more commonly named the Sincapore river; one side contains the warehouses, stores, offices, &c. of the merchants, as well as the native streets, bazaars, &c.—Opposite to it is an extensive plain, adorned by several elegant mansions; and beyond the Kampong Glam, Malay town, with the residence of the sultan of Johore and his followers; from him the island was purchased by the British Government, for which he still receives the annual pension which had been stipulated at the time. Close to the creek, which has received the more dignified application of the "Sincapore river," wharfs extend from and opposite to the warehouses of the merchants. The two most extensive and splendid buildings are those recently erected by Messrs Armstrong and Gemmil. The Commercial square, contains some very good buildings, used as offices, shops, and residences; the most conspicuous of which, for elegance, is the building used as offices and warehouses by the firm of Messrs. Rawson, Houldsworth, and Co. The river, at the lowest part of the settlement, always presents an animated scene, from the arrival and departure of native boats, with fruit, vegetables, and live stock, as well as from the number of sampans plying for hire, or attending upon the commanders of vessels, who employ them, in this sultry climate, in preference to exposing their crews to a tropical sun; many native boats lie waiting or delivering cargoes of the various productions of the fertile islands in the vicinity. At night, the flickering and brilliant lights from the numerous boats upon the river make an animated appearance.—[Bennett's Wanderings.]

Structure of Feathers.—Sir David Brewster communicated to the British Association a verbal account, which he illustrated by figures, of some curious results, which he had obtained respecting the structure of feathers. Dr. Paley and Dr. Roget had, as he mentioned, explained, generally, the beautiful mechanism by which nature enables the tender fabric of the vane of the feather to resist the action of the air, and to repair itself when divided. By the use of very fine microscopes of garnet and sapphire, Sir David succeeded in developing the mi-

nute structures by which the preceding mechanism operates: and he particularly described a singular spring, consisting of a number of slender fibres laid together, all of which resisted the division of the feather or the separation of its fibrils, and which again closed themselves together when their separation had been forcibly effected. He described the difference between down and feather, the former being intended either for ornament or warmth, and the latter for resisting the action of the air when a continued fabric was necessary. These observations were made chiefly on the large feathers from the wing of the vulture; but, generally speaking, the structure is the same in other feathers, though with various modifications. The curious property preserved by the fibrils of hooking themselves together when they had been separated, was mentioned as a singular provision of nature, though the author felt some difficulty in giving a perfectly satisfactory explanation of the manner in which it was effected.

Free Negro Labor.—According to a calculation which is considered to be correctly made, the island of Jamaica exported in 1823, with 342,382 slaves, 1,417,758 quintals of sugar, which was a year of great fertility in the West Indies: and Puerto Rico, with 45,000 slaves, at the highest calculation, produced 414,663 quintals; therefore Jamaica, with a number of slaves, nearly nine times greater, yielded only 3 1-2 times more sugar, which clearly shows that free labor in Puerto Rico contributes largely to produce even sugar. To the number of free laborers only can this difference be attributed, for it must be acknowledged that although the soil of Jamaica is not so fertile as that of Puerto Rico, yet the cultivation of the cane is better understood. In the same year, the three British islands of Barbadoes, St. Vincent's, and Grenada, which, with the exception of Jamaica, produce most sugar of all the British Antilles, with the labor of 128,000 slaves, yielded 784,567 quintals of sugar; that is to say, that with more than three times the number of slaves, they produced less than double the quantity of sugar raised in one year in Puerto Rico. The same year, the whole of the British West India colonies, with 627,000 slaves, yielded only 3,005,366 quintals of Sugar; which proves that with 15 1-2 times more slaves, they only produced 7 1-2 times more sugar than Puerto Rico. In 1821, 428,962 quintals of sugar, 20,758 quintals, 96 lbs. of cofiee, and 1320 quintals of cotton were produced in the island of Guadaloupe, by the labor of 87,998 slaves; while Puerto Rico, with about half the number of slaves, moderately worked, and humanely treated, produced, besides the quantity of sugar already stated, 25,000 quintals of coffee, 34,163 quintals of tobacco, and 9,166 quintals of cotton, together with cattle, pepper, rice, and many minor productions. This simple enumeration of facts is sufficient to establish the advantages arising from, and the extent of, free labor in Puerto Rico. —[Flinter's Account of Puerto Rico.]

Indian Method of Catching Fish.—By means of a plant the Indians have a sweeping method of catching fish, which we for the information of pond and river poachers in this country may give, "The *Hairy* (with which the Indians intoxicate fish) is a plant of the papilonacea order, bearing a small quantity of bluish blossoms, which poduces pods about two inches long, less in the leaf than a goose quill, and enclosing about ten small gray leaves; leaf nine inches long, central stem with four spearpointed leaflets on each side, two inches long and one at the apex: root, when full grown, three inches in diameter, containing a gummy, milky juice, which is a powerful narcotic, and prepared by the Indians for fishing, by beating with sticks until reduced to a mass like coarse hemp; the Hiary root is then employed to saturate a corial (canoe) full of water until it is of a milky whiteness, then conveyed to the selected fishing spot, and the water sprinkled with the infusion (a solid cubit foot of the root will poison an acre of water surface;) in about twenty minutes ever fish within its influence rises to the surface, and is either taken by the hand or shot with arrows, neither deteriorated in quality nor tainted more rapidly than when hooked."—[Martin's History of the British Colonies.]

Never Squabble with a Wit.—Dr. Marmaduke Coghill, the Chancellor of the Irish Exchequer, in a letter dated 1st April, (an eminous day.) 1736, observes to the Honorable Edward Southwell—"I see Sir Thomas Prendegrass has got nothing by his resentment against Dean Swift; and, indeed, I never knew any man a gainer by being provoked at a wit, for the laugh is always against you, and the only return from a wit is fresh satyr."

LONDON SERENADING IN 1703.—In a letter from Mr William Bird to Mr. Secretary Southwell, dated June, 1703, he says, "Lord Conway bid Mrs. Johnson adieu in the finest serenade I ever heard. It lasted from one to three o'clock, and brought all the ladies in Red Lion-square to their windows, and Mrs. Tempest took it ill that the compliment was not paid at her door.

Vanity.—In 1810, a notaire's clerk killed himself, leaving a piece of paper behind him, on which he declared, that having duly calculated and considered, he did not think it possible for him to be so great a man as Napoleon—therefore he put an end to his existence,—[H. L. Bulwer's France.]

UTICA AND SCHENECTADY RAILROAD COMPANY.
Call for Second Instalment on Stock.

THE Stockholders in the Utica and Schenectady Railroad Company are requested to pay on or before the twentieth day of December next, the sum of Three Dollars on each Share of Stock in the Company held by them respectively under the penalty (provided by law in case of non-payment) of the forfeiture of all previous payments made thereon.

Stockholders residing in the city of New York, or within said State and south of the counties of Columbia, Greene and Delaware, are requested to make said payments to the Cashier of the Phenix Bank, at the said Bank in the city of New York; and all other Stockholders in said Company are requested to make said payments to the Treasurer of said Company at the Albany City Bank or at the Commercial Bank, in the city of Albany; but any Stockholder residing west of the counties of Albany, Schenectady or Saratoga may make such payments by depositing the same to the credit of the said Treasurer in the Ontario Branch Bank, in the city of Utica, or in the Herkimer County Bank, at Little Falls, or in the Montgomery County Bank, at Johnstown, provided a certificate of such deposite (with the name of the Stockholder by or for whom such deposite is made) be forwarded to said Treasurer, so as to be received by him on or before the 25th day of December next.

Albany, November 13, 1834. By order.
GIDEON HAWLEY,
Treasurer of the Utica and Schenectady
nov17d&Ctdec20 Railroad Company.

LONG ISLAND RAILROAD COMPANY.

NOTICE IS HEREBY GIVEN, That the undersigned Commissioners, appointed by an act of the Legislature of the State of New-York, passed April 24, 1834, will receive subscriptions to the capital stock of the Long Island Railroad Company, being One Million Five Hundred Thousand Dollars, divided into shares of fifty dollars each, agreeably to the charter of said Company, on the 15th, 16th, and 17th days of December next, from nine in the morning to three in the afternoon of each day, at the following places, viz.—At the Dry Dock Bank, No. 333 Pearl-street, in the city of New York—at the Apprentices' Library in the city of Brooklyn, county of Kings—at the Coast House, in and for the county of Queens—at the Inn of William Griffing, in the town of River Head, county of Suffolk—at the House of Thomas Hallock, in Smithtown, in said county of Suffolk.

Subscribers are required by the Charter of the Company to pay to the Commissioners at the time of subscribing five dollars on each share.

Copies of the Charter can be had upon application at the Dry Dock Bank, 333 Pearl-street, New-York.

Samuel Hicks	Benjamin Strong
John Lorimer Graham	Joseph Moser
Edwin Hicks	Edmund Frost
Singleton Mitchell	Nicholas Wyckoff
William F. Rydenburgh	James H. Weeks
Joseph H. Goldsmith	Valentine Hicks.

13nov tDec. 18

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, }
January 29, 1833. }

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept.13-1y.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 16, 1833. A29 tf RM&F

STEPHENSON,
Builder of a superior style of Passenger Cars for Railroad
No. 264 Elizabeth street, near Bleecker street,
New-York.

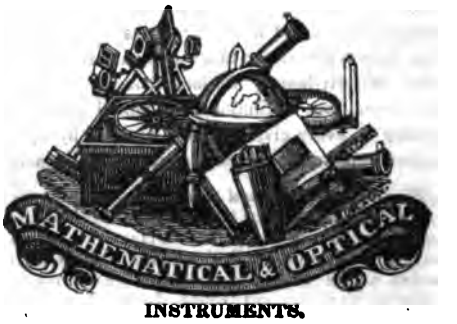
☞ RAILROAD COMPANIES would do well to examin these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.
J25 tf

RAILROAD CAR WHEELS AND BOXES,
AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.
Also, Flange Tires turned complete.
J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,
Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Notz's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18



INSTRUMENTS.
SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m26

The frequent riots and outrages committed by the laborers on the Baltimore and Washington Railroad have induced the people residing in its vicinity to call a public meeting, to adopt measures to prevent a repetition of them. At this meeting a preamble and resolutions were adopted, which breathe a true American spirit.

It is time that the thousands who flee from *beggary and want* at home, to this country of peace and plenty, where they enjoy privileges in common with the native citizen, should be *taught*, the necessity of *obedience to the laws*—and respect for the life and property of all. They must be taught that their having been slaves and paupers at home does not give them the right to murder our citizens, and take possession of their property, on their arrival here; that, although ours is a country which affords an asylum for the oppressed of all nations, NATIVE citizens are not yet prepared to yield every thing to those whom they have often, by their liberal charity, saved from suffering and even starvation. Let AMERICANS every-where adopt a similar course towards those who show a disposition to trample on their inalienable rights and privileges; whilst to those who appreciate and respect our institutions, we would offer the enjoyment of every civil privilege secured by the most perfect constitution that was ever framed by man.

Washington Railroad Outrages.—At a large and respectable meeting of inhabitants of Anne Arundel and Prince Georges counties adjacent to the Baltimore and Washington Railroad, and held at Merrill's tavern on the 26th inst. Col George Cooke being called to the chair, and George L. Stockett, Esq. appointed Secretary. The following preamble and resolutions were unanimously adopted:

Whereas, a portion of Ann Arundel and Prince George counties, bordering on the Baltimore and Washington Railroad, has been the the scene of successive riots, dangers and bloodshed since the commencement of said work down to the present time, and whereas, the recent scene of murders of the most wanton, diabolical and atrocious character upon respectable and unoffending citizens, scarcely paralelled in the annals of our history has given ample cause to our fellow citizens for alarm and apprehensions for the safety of our lives; and whereas, while they suffer themselves to remain exposed to the deep laid schemes of that population from which all these grievances emanate,

And whereas, it is known to be confined *exclusively* to that class of laborers which has been generally employed on the aforesaid work, and it having been established beyond all question, that the Irish laborers compose that class, and that they have formed secret associations, to which they are bound under the most awful and solemn oaths to keep each other's secrets, and under which association they are enabled to accomplish their hellish plots without being in danger of discovery. And whereas, the good citizens of these Counties have in vain set forth their grievances and remonstrances to the proper sources for the removal of the causes. And whereas, it is the right and bounden duty of our fellow citizens to defend themselves and their property against the hand of the ruffian, we the subscribers, citizens of the aforesaid Counties, do unanimously agree to adopt the following resolutions, viz:—

Resolved, That we do consider and hold the present class of Irish laborers employed on the Baltimore and Washington Railroad as a gang of ruffians and murderers, combined together under the most solemn ties to carry into effect such hellish designs their passions or prejudices may prompt them to commit.

Resolved, That, inasmuch as by their plans of secret association, justice and the laws are deprived of their dues, it behoves our fellow citizens to adopt such measures as will tend to their quiet and safety.

Resolved, That so long as the cause of these evils remain among them, there is no security for either, and that it is *indispensible* that it be removed.

Resolved, That the President and Directors of the Baltimore and Ohio Railroad company, be requested to order their agents and contractors to discharge from their employ all such laborers as have been herein described.

Resolved That we will use all lawful means in our power to bring to justice, as many of the participators in the late murders, and all suspected persons as can be arrested.

Resolved, That we will unite in expelling from our counties, *forcibly if we must*, all such characters as have been herein described.

Resolved That the thanks of this meeting be presented to Lt. Col. Campbell and the officers and troops under his command for the prompt and efficient aid afforded by them in the arrests which have been made with the view to the conviction of the perpetrators of the murders of John Watson and William Messer.

Resolved, That the thanks of this meeting be presenting to Lt. Col. Williams for his zeal and services in aiding the civil authorities to arrest and put down those rioters, as also to Major Horace Copron for the prompt and fearless manner in which he executed his orders, with so small a force, and to our fellow citizens who so promptly volunteered their services on this important occasion.

Resolved, that this meeting approve the subjoined letter of Col. George Cooke addressed to the President of the Baltimore and Ohio Railroad.

Resolved, That the proceedings of this meeting be published. GEO COOKE, *Chairman.*

GEO. L. STOCKETT, *Sec'y.*

[Here follows the signatures.]

Anne Arundel County, Nov. 20, 1834.

PHILIP E. THOMAS, Esq. President of the Baltimore and Ohio Railroad.

Dear Sir—In consequence of the recent murders on the Washington Railroad, the inhabitants of the county adjacent to the Railroad have been kept in a continual state of alarm, no efficient measures have been adopted by the company to find out and arrest the murderers, and also from the fact that a number of our citizens have been threatened by the laborers on said road, I have been requested to state for your information that the residents of this section of the country are determined that in case the company do not adopt such measures as will in future secure them from being harrassed by these frequent riots on the road, that they will muster a sufficient force and drive every Irishman off the road from the Patapsco to the big Patuxent, at all hazards, and in this determination they are promised the co-operation and aid of other sections of our county.

In making this communication I assure you the people are actuated by no other motive than to put an end to these continued murders and riots, which, if they are permitted to go unpunished as heretofore, may in the end lead to those wretches depredating still farther on the surrounding neighborhood. If the ring leaders cannot be secured and punished, the whole force ought to be discharged and a new set employed.

The work had better be delayed a short time than to be the scene of such frequent and disgraceful outrages. With respect your obedient servant.

GEO. COOKE, *Chairman.*

More Aggressions.—The driver of the Mail stage from Washington, states, that the stable attached to Merill's tavern at Waterloo, on the Washington road, about 13 miles from Baltimore, was burnt down last night about 12 o'clock. It is believed to have been set on fire by some of the laborers on the Railroad, who have been lurking about the premises for some days past. It is reported that a dwelling about two miles from Waterloo was also burnt, but there is no certainty of this.

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a2

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1 2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No 49, pag 772, Vol. 2, of Railroad Journal.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, J31 6t corner of Maiden lane.

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock-street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1833.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is *seven*. The *whole* number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. Germant. and Norrist. Railroad,
ml 1y

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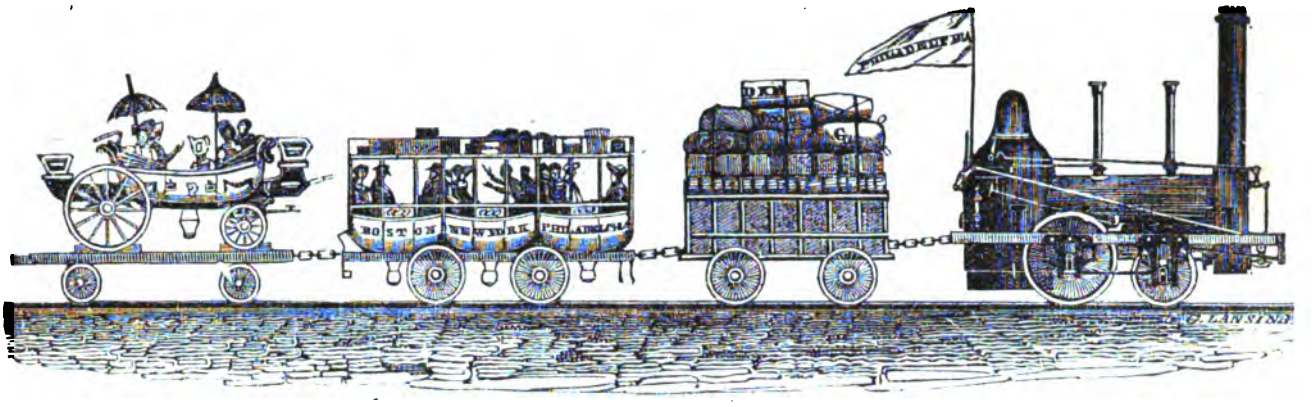

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, DECEMBER 13, 1834. [VOLUME III.—No. 49.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, DECEMBER 13, 1834.

To Correspondents.—"A Subscriber's" communication upon the use of Locks, instead of Inclined Planes and Stationary Power, to overcome elevations on Railroads, &c., will be attended to at an early period.

We would call attention to the able article in this number, from the Edinburgh Quarterly Review, upon the utility of railroads.

Steam Carriages on Common Roads.—An interesting letter will be found in this number of the Journal, from Mr. G. Ralston, of Philadelphia, now in London, upon the subject of steam carriages. It will be read with much interest, as coming from a gentleman well known in this country. The drawing to which he refers has not yet come to hand, but we have one, of the era, which, together with an interesting article from the London Mechanics' Magazine, will be given in a subsequent number.

An engraving and description of the "Autopsy" carriage was published some months since in the Journal.

A BOLD PROJECT!—Suspension Bridge between New-York and Brooklyn.—We have before us a beautiful drawing of a Suspension Bridge over the *East river*, at Fulton street. It is accompanied by a description, and some interesting facts relative to suspension bridges in Great Britain, which we shall publish as soon as we can make room for it. In the mean time the plan may be seen at this office. It is a subject well worth investigation, both as a matter of convenience and ornament to the two cities.

Canal Convention.—The convention, to which we have heretofore referred, called to meet at Baltimore on Monday last, assembled according to appointment. Delegates were in attendance from Virginia, Maryland, Pennsylvania. Ohio, and the District of Columbia. Officers, pro tem., were appointed. A committee appointed to select permanent officers recommended the following, who were elected, viz.:

President.—G. C. Washington, of Maryland.
Vice Presidents.—Elisha Whittlesey, of Ohio; Elijah Boyd, of Virginia; William A. Bradley, of the District of Columbia; William Robinson, of Pennsylvania.
Secretaries.—J. P. Kennedy, of Baltimore; Joseph Shriver, of Maryland.

We shall hereafter give the result of their proceedings.

Stephenson's Improved Locomotive.—From the Repertory of Patent Inventions for November, we find a drawing and particular description of Mr. Robert Stephenson's recent improvements upon the locomotive engine.

One of his improvements consists in divesting the large, or driving, wheels, which are attached to the crank axle, of their *flanges*, and the addition of a pair of wheels aft. The object of this improvement is to prevent the frequent fracture of the crank axle, which he attributes, and very justly so, too, as we think, to the great additional strain to which they are subjected on curves, turns-out, and crossings, in resisting the tendency to run off the rail. By this improvement, the crank axle is only subject to its proportion of the weight of the engine, together with the *driving* machinery, whilst the engine is kept on the rails by the flanges on the forward and aft wheels. Mr. Stephenson has also appended to his improved engine, a brake, or clogg, to be acted upon by steam. This brake is placed between the driving and after wheel, and it is thought by Mr. Stephenson to possess very great advantages over those now in use, worked by hand. These improvements are minutely described, and accompanied by engravings, which will appear in the next number of the Journal.

Improved Railroad Chair.—We also find in the November number of the Repertory of Patent Inventions, a description and drawings of the Railroad Chair, as improved by Robert Stephenson, the younger. The improvement consists in a self-adjusting bearing *in* the chair for the rail to rest upon, by which means the rail retains its position, although the stone support, or block, or cross sill, upon which the chair rests, may, from the settling of the ground, tilt, or incline lengthwise of the rail. To use the language of his specification, the improvement is "the application of a self-adjusting segmental bearing-piece, into a suitable cell, at the bottom of the notch in each chair, in order to form a bearing surface for the rail to rest upon; the said bearing piece being in the form of a segment of a circle, and being lodged with its convexity, or circular arch of the segment, downwards, within the cell, which is of a corresponding concavity, the flat side, or chord of the segment, being upward, and forming the bearing surface for the rail, at the bottom of the notch in the chair; upon that bearing surface the rail is to rest, and the said bearing surface will always accommodate itself to the underside of the rail." He has also made some improvement in the manner of confining the rail *in* the chair. This improvement consists in the insertion of pins into, or through, the cheeks of the chair at right angles with the notch, the point or end of which is to fit into a small longitudinal groove in the side of the rail, thereby confining it down, yet allowing it to elongate and contract by the change of temperature; the pin is to be confined in its place by a tapering key, which is to pass through a mortice in the cheek of the chair, and the *pin* at right angles, so that, as the key is driven, the pin will press more firmly against the rail. The chair is to be of cast, and the pin, key, and segmental bearing pieces, of wrought iron.

We shall give the specification and drawings in a subsequent number.

Railroad.—A most unprecedented and pleasing circumstance was witnessed on Sunday last, at the Railroad Depository, being the arrival of three Locomotives at one time, having at their train *sixty freight cars*, laden with *nine hundred and g h* bales of cotton.—[Charleston Courier.]

The following extracts from the last number of the Edinburgh Quarterly Review, are so much in accordance with the views so often expressed in this Journal, of the great and growing utility of Railroads, *especially to large towns and cities*, and illustrate the correctness of those views so much more clearly than we could possibly do, that we cannot refrain, notwithstanding their length, from giving them to our readers.

The remarks of Mr. Pease, relative to their interference with Turnpike Roads, should be well considered by those who oppose the New-York and Erie Railroad, fearing that it will injure the business on the Canal.

It is now two years since we called the attention of our readers to the great advancement which had been made in the art of applying steam-power to the important purposes of inland transport. We then foretold the rapid extension of this great instrument of social improvement; and subsequent events have amply verified our predictions. Railroad undertakings have been entered into with an avidity to satisfy the most ardent, and to create alarm in the more timid and cautious. In our own country, however, the number of checks on such schemes are sufficient to prevent the public from rushing into them with undue precipitation; and the danger rather is, that private and local interests may act as too great a drag on public enterprise, than that the latter principle should receive undue scope. A considerable portion of the property of the country, and more especially of that in land, has, in many instances, opposed serious obstructions to parties seeking legislative sanction for projected lines of railroad; and although, in some cases, such opposition has proceeded from sinister motives, or such as would not bear an open avowal, yet we must suppose that, in the majority, the ostensible objections have been seriously and sincerely, though erroneously, entertained. In the present article, we shall endeavor to show, not only that the principal objections so urged are unfounded in themselves, but that they are in direct opposition to the results of experience, and as much opposed to the real interests of the objectors as to the public good. We shall also briefly advert to the principal lines of communication recently undertaken, and to those which are in progress in other parts of Europe, and in America.

The opposition which railway companies experience in obtaining the necessary legislative sanction, proceeds, in the majority of cases, in this country, from the landholders, through whose lands the projected lines are to pass. Nevertheless, it is demonstrable that there exists no class of persons whose interests are more likely to be promoted by such improvements than those of the local proprietors. One ground of objection assumed by proprietors resident in the vicinity of projected lines of railroad, is the apprehended nuisance of the noise and smoke of the engines, and of the exposure of their premises to the intrusion of large numbers of passengers. The evidence produced before the Committee of the House of Commons, on the London and Birmingham railroad, will show how unfounded are such objections.

Mr. Hardman Earle, a Liverpool merchant, was one of the most determined opponents of the Liverpool and Manchester railroad. His family had, at the cost of above £12,000, built a house, and laid out pleasure-grounds, through which the line of railway passes; and their opposition was founded partly on the apprehended injury and inconvenience arising from this circumstance. Mr. Earle, therefore, was very properly summoned as a witness before this Committee, and the following is a part of his testimony.

"Have you experienced any inconvenience since the railway was constructed?—No inconvenience whatever has been experienced.

"Are the grounds infested by the people in consequence of the passage of the locomotive engine?—No.

"Is there any thing offensive in it?—Nothing whatever.

"Is there any smoke?—None whatever.

"Is there any noise?—No; it is rather an object of interest to persons residing there.

"Are you able to say whether the inhabitants of other houses are annoyed?—I am enabled to say they do not consider them a nuisance.

"At the commencement of the undertaking were you a determined opponent to the measure?—Yes; my mother was a petitioner against the bill, and I appeared as evidence against it.

"From all that you have since seen, you would no longer oppose the construction of railroads?—Certainly not; from what I have seen my opinion is entirely changed."

In fact the fuel burned is coke, which produces no smoke. The smoothness of the road, and its freedom from those asperities which exist on the best constructed turnpike roads, are such that the wheels move with comparatively little noise. But, in addition to this, the speed being almost three times that of common coaches, and more than seven times that of waggons, the noise is almost momentary. A train of waggons or coaches shoots past with the speed of the wind, and the noise is scarcely perceived before it ceases; it cannot be heard on a still day at a greater distance than one hundred yards.

Another ground of objection, urged by landlords, is the apprehended depreciation of the value of the adjacent land. The facility of communication with the metropolis and populous towns is so obvious an advantage, that we cannot help expressing our astonishment that such an apprehension should for a moment be entertained. As those who could entertain an objection so unfounded are little likely to be accessible to the reasoning by which it might be refuted, we shall here confine ourselves to facts, and show that in every case, without a single exception, which has come under inquiry, the value of land adjacent to a successful line of railway has been considerably increased.

Mr. Pease, M. P., a director of the Stockton and Darlington railway, stated, in his evidence, that he had been for ten years a director of that company, during seven years of which the railroad had been in practical operation; that he had closely observed its effects on landed property through which it passed, or which was adjacent to it, and that he had been privy to all the negociations which had taken place between the railroad company and the proprietors from whom they had made purchases.

"Do you know whether the advertisements for letting farms or selling estates contain any thing relating the railroad?—It is invariably stated, either that the railroad passes through the estate or near to it; they consider it as an enhanement of the value of the property.

"Are you a landholder yourself in the neighborhood of the railroad?—I have one small estate, which it intersects into two equal parts nearly. It passes through the enclosure in which the homestead stands.

"Have you been benefitted by the railroad passing through it?—I have; the cuttings are available as drains; the rent of the property is increased one-fifth. I let the farm subject to its being given up on the railroad being made, and I have since received one-fifth additional rent.

"Do you know any instance of the reduction of rent, in consequence of a railroad passing through a farm?—I have made inquiries, but have not been able to meet with such an instance."

The Stockton and Darlington railway was originally intended to be a single line; but after its formation the company found, from the extent of traffic upon it, that a double line would be necessary. Having originally purchased no more land than was necessary for the single line, they were obliged to treat with the same proprietors for an additional tract to widen the road, so as to receive the second line of railway. Nothing can more conclusively decide the question of the effect of the railway on the value of land than this circumstance. Here was a portion of land, purchased before any railway had been constructed; and an equal quantity, in precisely the same place, was subsequently purchased from the same parties by the same company, after the formation of the single line of railway. Mr. Pease was examined as to the terms on which the second portion of land was purchased.

"Have you paid on those (second) treaties an increased value upon the land beyond what you paid before the line was established?—Invariably.

"Can you say to what amount?—I should say that we have never objected to pay an advanced price of 50 per cent.

"Was this in consequence of the increase of value arising from the railroad?—We were quite aware of the increased value to the owner, and made no objection to the advance."

Mr. Thomas Lee, a surveyor and agent to several landed gentlemen in the neighborhood of the Liverpool and Manchester railroad, was examined as to the effect of the railroad upon the value of land in that neighborhood.

"Can you tell the committee whether, in an agricultural point of view, property has been improved or deteriorated by the railroad passing through it?—It has been improved.

"Have the farmers been benefitted by it?—They have.

"Have Colonel Lee and Mr. Trafford obtained higher rents in consequence of it?—They have.

"Have you taken land yourself at an increased rent.—At double the original rent."

Mr. Hardman Earle, before mentioned, was examined to the same point.

"Do you know any instance in which the value of land has been affected by the railway?—I think the Chat Moss was an instance of that kind. They bring manure from Manchester to Chat Moss; and wherever a station is formed, the value of the land is improved. You see advertisements recommending a site, because the railroad runs near or through it.

"Do you know of any instances by which land has been depreciated by it?—I think I can say positively that there is not an instance on the Manchester line.

"Do you know of any persons quitting their dwelling-houses in consequence of it?—I do not know of one. I should be glad to purchase land on the line, to build for myself."

We may here state that the Chat Moss is an extensive district of bog and morass, over which the railroad was carried at incredible labor and expense. It was of course previously altogether unproductive. We now, however, see on each side of the road extensive systems of drains, gradually carrying off the water, and leaving tracts of considerable fertility. There is no doubt that within a very short period the whole of this morass will be transformed into a fertile tract of arable land.

Another ground of objection is the injury likely to be produced to turnpike trusts. Even if the truth of this objection be admitted, it is not one of sufficient force to warrant the sacrifice of public benefit. A turnpike trust is, or ought to be, held only for the public good; and if it should eb affected by the establishment of a railroad, this would only prove that the one was found more beneficial than the other. But it is a curious fact, that this apprehended injury has

not (at least in every instance) ensued. The Stockton and Darlington railway furnishes a remarkable example to the contrary.

Mr. Pease states in his evidence that the turnpike roads in the neighborhood of that railway have been improved since its construction.

"Has there been any advantage derived to the roads in the neighborhood?—I consider that they are all of them in a much better state of repair, and that their funds are improved: I do not know a single exception.

"Do you know the road from Stockton to Barnard Castle?—Perfectly well; I have been a commissioner. In that trust there are two roads running nearly parallel with the railroad, and a third intersected by it.

"Were the trustees of these roads petitioners against the bill?—All of them.

"On what grounds did they oppose it?—That the money borrowed on mortgage was hazarded by the railroad.

"Have their fears been realized?—No; the funds in all cases are improved.

"You state that of your own knowledge?—Yes, as an acting commissioner."

The advantages likely to arise to agricultural producers from the facilities of conveying their produce to market, as well as the reciprocal advantages derived by the consumers, were rendered apparent by the evidence of several farmers and graziers, and also of metropolitan butchers.

Mr. W. Meade Warner, an extensive farmer residing in Oxfordshire, stated that he considered that if the railroad now proposed to be carried from London to Birmingham had been formed ten or fifteen years ago, it would have produced him an advantage of not less than fifty pounds a-year. He considered that the whole system of farming grass land would undergo a change, owing to the new capabilities which would be conferred upon it, by the speed, certainty, and cheapness of the communication with the market. A different kind of produce, of a much better and more profitable quality, would be obtained from it.

"Are lambs sent to London from your neighborhood?—They are, principally on the road; but when too young to leave the mother for so many days as the road requires, they are sent by waggons. Not many, however, are sent by this way.

"Are you prevented from sending many lambs to market by the difficulties of the road?—We cannot send them so young as we would otherwise send them. It is of importance to send them early in the season, as the ewe would feed off earlier.

"If a railroad were established, would they be sent by you and the other farmers by that means?—No doubt of it.

"Do the same observations apply to calves as to lambs?—Exactly.

"Are the cattle much injured by being driven up?—Very much; incalculably."

It is not merely views of policy that should lead us to seek for some improvement in the transport of cattle to the markets. The following evidence is addressed to the feelings of common humanity.

"Supposing that even the cost was increased of sending them by the railroad, would it be of advantage to the farmer to have them conveyed by that means, nevertheless, instead of driving them in the ordinary way?—Certainly; it would be a great advantage. Sometimes the poor things are driven till their feet are sore; and the effect of that is, that they are sold on the road for what they can get. It is often the case, that they drive many of them till they have not a foot to stand on.

"What price, in your opinion, would the farmer be willing to pay for the conveyance of his cattle to London by the railroad, instead of the present present way?—If I paid double, I should still be a very great gainer. It is a very important thing in the saving of beasts and sheep, both as to the exposure and the nuisance they create on the public roads. Besides that, the cruelty and injury to the animals is beyond all belief.

"Do I understand you rightly, that you would prefer to pay fourteen shillings for transmitting your cattle by railroad, to paying seven shillings for the ordinary means of conveyance?—To be sure I should."

Mr. Charles Whitworth, a very extensive farmer in Northamptonshire, was examined on the same points. He had seen cattle conveyed on the Manchester railroad, and stated that they came from the journey "as fresh as if they were just off the 'field.' He stated, that in order to send the lambs to market, it was necessary to send the ewes a part of the way with them; and 'even then they were much injured before they reached London.'"

The injury sustained by cattle coming to the London market was further proved by Mr. John Sharp, an extensive butcher, residing in Mary-le-bone. He stated that he has been for forty years established as a butcher, and that he never failed to observe more or less injury sustained by cattle driven from a distance to London; that their value was considerably lessened, owing to the inferior quality of the meat, arising from the animal being slaughtered in a diseased state; that the animal, being fatigued and over-driven, "becomes feverish, and his looks become not so good, and he loses weight by the length of the journey and the fatigue." He stated further, that even steam vessels, where they could be resorted to, did not altogether remove this objection. Cattle come from Scotland by steam-vessels, and they are found in London to be in an unnatural state: "they seem stupified, and in a state of suffering from fatigue."

It is not merely the fatigue of travelling which injures the animal, but also the absence from its accustomed pasture. Mr. Sharp stated that the injury from this cause was more or less under different circumstances, but always considerable. In order to obviate this, a considerable portion of the meat supplied to the London market is slaughtered in the country, and it comes in this state, in winter, from distances round London to the extent of one hundred miles. In warm weather a large quantity of it is spoiled, and a still greater quantity is deteriorated by this mode of conveyance. The transport of calves and lambs, from a distance greater than thirty miles, is altogether impracticable; and even from that distance is attended with difficulty and injury. To convey these and other live cattle from a great distance, not only speed, but evenness of motion, is indispensable. Now these two requisites cannot be combined by any other means than the application of steam-engines upon a railroad.

From the whole of the evidence, the fact appears to be indisputably established, that the supply of animal food to the metropolis is not only defective in quantity, but that it is of unwholesome quality,—comparatively, at least, with what it might be, if the tract from which it could be supplied were rendered more extensive. But forcibly as the evidence bears on this species of agricultural produce, it is still stronger respecting the produce of the dairy and the garden. Milk, cream, and fresh butter, vegetables of every denomination, and certain descriptions of fruit, are supplied exclusively from a narrow annulus of soil, which circumscribes the skirts of the metropolis. Every artificial expedient is resorted to, in order to extort from this limited portion of land the necessary supplies for a million and a half of people. The milk is of a quality so artificial, that we know not whether, in strict propriety of language, the name milk can be at all applied to it: the animals that yield it are fed not upon wholesome and natural pasturage, but in a great degree on grain and other articles. It will not be supposed that the milk which they yield is identical in wholesome and nutritious qualities with the article which would be supplied, if a tract of land of sufficient extent for the pasturage of cattle was made subservient to the wants of the metropolis. Add to this, that inferior as must be, under such circumstances, the quality of the milk, there exists the strongest temptations to the seller who retails it, to adulterate it still further, before it finds its way to the table of the consumer.

Mr. Warner, already mentioned, stated that, great as the advantage of a railroad would be to graziers who supplied the London butchers, it would be of still greater advantage to dairy farmers.

"Have you ever had offers made to you to supply any part of London with milk?—I have; but have never been able to comply with them on account of the want of a conveyance.

"If there was a railroad, by which you could transmit milk, and thus avail yourself of such an offer, would it add materially to the profits of your farm?—There is no question that it would increase the profit at least 400 or 500 per cent. I have no doubt of it, on milk and butter."*

In the produce of the dairy and the garden, it is not merely by smoothness and ease of transport that a railroad would offer facilities. Articles of a perishable nature must be supplied to the consumer within a short period after they are taken from the soil. The speed of railroad conveyance being six or seven times that by cart or wagon, the consequence would be, that such articles would be supplied to the metropolis from a circuit with a radius six or seven times the length of that which now supplies them; and consequently the land which would become available for the metropolitan markets, would be from thirty-six to forty-nine times the present extent; supposing railroads to diverge in all directions from the metropolis, and to be furnished with their usual ramifications.

In our former article on this subject, we attempted to show, by general reasoning, the immense benefits which would accrue, both to farmers and landlords, as well as to the inhabitants of towns, by carrying extensive lines of railroad through populous districts, connecting them with those places from which supplies of food and other necessaries might be obtained. We showed that the factitious value which tracts of land immediately surrounding the metropolis and large towns acquire from the proximity of the markets, would be moderated, and a portion of their advantages transferred to the more remote districts; thus equalizing the value of agricultural property, and rendering it in a great measure independent of local circumstances. We showed, further, that the profit of the farmer, and the rent of the landlord, would be benefitted by the reduced cost of transport, and that such benefit would be likewise shared by the consumer; in fact, that the advantages of centralization would be realized without incurring the inconvenience of crowding together masses of people within small spaces; and that the whole face of the country would be brought to the condition, and made to share the opportunities of improvement which are afforded by a metropolis, and by towns of the larger class. At that time, however, we had no specific evidence to adduce in support of our reasonings, so as to reach those minds which can be only influenced by a direct appeal to facts. The subsequent extension of railways has brought to light a body of evidence, so extensive, that our only difficulty lies in the selection of such parts of it as may not exceed our necessary limits.

The beneficial effects of the Liverpool and Manchester railway on the value of land in the district through which it passes, have forced conviction upon the minds of those who were the most conspicuous opponents to that project.

Mr. J. Moss, a director of the Manchester railway, gave the following testimony:

* This enormous estimate of the advantage is no doubt founded on the supposition that dairy produce would maintain its present price: an obvious error, but still the advantage would be very considerable.

"Is it contemplated to have a railroad between Birmingham and Liverpool?—It is quite arranged.

"Have you made application to the owners of land for their consent?—As far as our half goes.

"Have you found owners, on the line between Liverpool and Birmingham, to consent to the railroad there, who, nevertheless, opposed the Liverpool and Manchester line?—Several; among others, Lords Derby and Sefton.

"Did Mr. Heywood of Manchester oppose the Manchester railroad?—Yes.

"Did he afterwards complain of its not passing through his lands?—He complained very much of it."

If the ill effects of the opposition, on the part of landed proprietors, to projected railroads, were limited to the injury which they inflict upon themselves, the public would have less reason to complain of it; but unfortunately, other extensive injuries have been thus produced. The opposition by Lords Derby and Sefton to the Manchester railway bill, compelled the company to deviate from the line of road which they first proposed, and which Mr. Stephenson, their engineer, pronounced to be the best. That line must have passed through a part of the property of these noblemen, whose opposition would at that time have defeated the bill. The company were therefore compelled to select another line, which was not only much more expensive in the formation, but which has been since productive of consequences most injurious to the road, and to the interests of the company and the public.

The line which the engineer was compelled to adopt, imposed upon him the formidable enterprise of crossing Chat Moss; and involved the company in an enormous expense in forming a solid road over that extensive morass. This, however, was not the only or the most extensively injurious effect: it became necessary to carry the line of road over an elevation, so that the moving power had to overcome a slope rising at the rate of one in ninety-six in both directions,—extending through more than a mile and a half in each case. We explained in our former article the injury which such an ascent produces: to draw a load up a slope of this degree of acclivity requires an impellnig power, amounting to nearly four times the power necessary to draw the same load upon a level; the consequence is, that either auxiliary engines must be kept constantly at the foot of the slope, or else the impelling engine must be constructed with four times the power necessary on the level, and with a proportionate increase of strength and weight. We may safely assert, that no circumstance connected with the Manchester railway has been a more fertile source of expense and inconvenience than this occurrence. But if any thing be wanting to demonstrate the mischief of the proceeding out of which this has arisen, it is the fact detailed in the evidence of Mr. Moss, that a second line of railway has been in contemplation, connecting Liverpool with Manchester; that this second line is countenanced and encouraged by these very noblemen, Lords Derby and Sefton; that it is to pass through their grounds, and, we presume, to take the very course which was originally contemplated by the present railway company, and from which they were driven by opposition.

"Has there not been a scheme for another railroad?—Yes.

"Is it to pass through Lords Derby and Sefton's land?—Yes; they both consented. They threw us back the first year by the opposition to our road, and we then lost such a line as we never could obtain again. Since this, they have both consented that the other line shall pass through their property."

Other proprietors, however, more speedily learned their error, and actually made interest to get the line through their property.

"Do you know Bold Hall?—Very well; it is a fine house.

"Is it near Liverpool and Manchester?—Yes; the proprietor complained very much that we made a complete bend, to avoid his property.

"Did he afterwards wish you to cut off the bend, and go nearer by a straight line?—Yes; and we agreed to go much nearer to his house."

Besides the permanent advantages to land by opening large markets for every species of vegetable, animal, and mineral production, railways are attended with a variety of subordinate benefits, which, though they may appear inconsiderable, when compared with those already mentioned, yet ought not to be wholly disregarded. Among these may be mentioned the extensive employment of the local population in a work in which by far the greater proportion of the labor is of a rude kind; likewise, the purchase of materials of various kinds from the adjacent land-owners. It was proved that on the Stockton and Darlington railway, as well as on other similar works, large sums were paid to the land-owners for gravel, timber and stone, for materials for bricks, and for various other purposes, independently of the land purchased from them. It was also proved that a very large proportion of the poor rates of the parishes through which railways pass are paid by the railway company. The Manchester railway company, for example, contribute not less than £4000 per annum to the poor rates of their parishes.

Mr. Pease stated that more than half the entire rates of several of the parishes through which the Stockton and Darlington railway passes are paid by the railway company. But, in addition to this, the actual amount of rates is lessened by the extensive employment afforded for labor on the railway. Mr. Lee stated, that of the poor rates in the parish of Newton, one-fourth part was paid by the Manchester railway company.

The speed of transit, and the consequent frequency of communication between places of great commercial intercourse, are matters the importance of which can scarcely be overrated in this country. The time between Liverpool and Manchester, being a distance of about thirty-one miles, is now about an hour and a half; there are three deliveries of letters by post daily between these two places, so that two letters may be written and one answer received by the same correspondents in the course of a day. The frequency of communication might be still greater: nine trains of coaches start daily from each place, and, if it were necessary, there might be nine deliveries in each town. When the lines of railway from London to Birmingham, and from Birmingham to Manchester, shall have been completed, the time from London to Liverpool will be about eleven hours; the mail which leaves London at eight o'clock in the evening will therefore be delivered in Liverpool before nine the following morning. The time between London and Birmingham will be five hours and a half; there will probably, therefore, be two mails daily. The letters despatched from London at eight o'clock in the evening would be delivered in Dublin the following evening. From some improvements which are in progress in the steam-packets, it appears that, under average circumstances, they may be depended on to make the voyage from Liverpool to Kingston (near Dublin) in ten hours; the mail which would arrive at Liverpool at seven in the morning would therefore be at Dublin at six in the evening, so that the Dublin merchants could answer their London letters the same night. It would, therefore, be possible that an answer to a letter from London to Dublin could arrive in London in about fifty hours after the despatch of the letter.

In the evidence of Mr. Moss we find a striking instance of the preference given by the public to railroad conveyance.

"Do you know whether there are some places on the line from Liverpool to Manchester where persons go down a considerable distance to come to the rail?—Yes; Southport is an example. This town is 38 miles from Manchester, and 25 from Liverpool. Persons going to Manchester prefer to come the 25 miles to Liverpool, and 30 along the railroad, making 55 miles, to going 38 miles by the direct road to Manchester.

"Do they do that with a saving of time and expense?—They save both time and expense.

"Being aware of these facts, and knowing the projected line between London and Liverpool, are there many places from which persons would come to the railroad, for the purpose of going to London, rather than take the direct turnpike-road?—Yes; all places in the manufacturing part of Yorkshire, such as Bradford, Halifax, and Leeds; they would come to Manchester, and there take the railroad.

"What would be the saving from Leeds?—It would be 40 miles round; but it would save four hours in time, and £1 in money.

"What would be the saving from Rochdale? Ten hours in time, and 30s. in money."

A large portion of the time of those farmers and graziers, living at a distance from London, who are obliged to attend the London markets, is consumed in making the journey. Mr. Robert Attenborough, a farmer and grazier residing at Braybrook, eighty miles from London, stated that his business obliged him to attend once a week at Smithfield market; that it takes him three days and a night, travelling at night, to go up to London, do his business, and return; that he seldom gets home till four o'clock on Sunday morning; and that a like inconvenience is sustained by the other farmers and graziers in his neighborhood: that besides the expenses on the way, the fare of the coach is £3 4s., and that the sacrifice of his business at home is the consequence of his journeys to London. A railroad would take him to London in about four hours, and starting in the morning he could arrive at home at a reasonable hour the same night.

By the evidence of other witnesses it appeared that a saving to a very large amount has been made by houses of business in Manchester, since the establishment of the railway, in their agencies alone. Some notion of the extent of this may be formed, when we state that several houses have saved £500 a year in this item of expenditure.

The advantage of the increased speed and cheapness of communication obtained by railways, worked by steam-engines, is not confined to the saving of the time and money of those who are compelled by business, or induced by pleasure, to travel. Vast numbers, who, under other circumstances, would remain stationary, find it for their advantage to avail themselves of the opportunities of intercourse with distant places thus opened to them. It appears by the evidence of Mr. Booth, that before the establishment of the railway between Manchester and Liverpool, there were about twenty-two regular coaches running between these places; these coaches were licensed to carry about 700 persons; and taking them at their average number, they may be estimated as having transported 450 persons daily between these two towns. The inside fare was ten shillings, the outside six; and the time of the journey varied from four hours to four hours and a half. The fare at present, on the railroad, by the first class train, is five shillings and sixpence, and by the second class three shillings and sixpence—being about half the fare by the coaches; and the time of the first class an hour and a half, and of the second class two hours—being less than half the time occupied on the turnpike road. The number of passengers between the two places in the six months ending in December, 1838, was 215,071 booked; to which, if we add 5000 for the passengers taken up on the road and not booked, we shall have a total of about 220,000: if we divide this by the number of days in the half-year, we shall find that the average, daily, including Sundays, was 1,209,

It appears, therefore, that the number of passengers between these towns has been tripled since the establishment of the railroad; in other words, about 800 persons daily, who have occasion to pass between the two places, but who were before prevented from doing so, either by reason of the time or expense of the turnpike road, are now enabled to perform the journey.

[*To be continued.*]

We have great pleasure in publishing the following letter and facts, furnished us by an esteemed friend now abroad.

London, Sept. 23, 1834.

To the Editor of the Railroad Journal, &c.

Sir,—Having occasion, a few days since, to accompany two Philadelphia gentlemen to call on Mr. Hancock, who has steam carriages travelling on the common roads of this metropolis, I beg to give you some memoranda of the information I obtained from the conversation with that gentleman, which may probably interest the numerous readers of the excellent and most useful "American Railroad Journal," which I receive regularly from my brother in Philadelphia, and always peruse with the greatest pleasure.

Enclosed I send you the principal information derived from Mr. Hancock. I have sent by the packet, a colored engraving of the "Autopsy" and "Era," to a friend in New-York, with the request that he would hand it to you in my name.

Before I left home (Philadelphia) last spring, I had frequently endeavored to gain information respecting the expediency (the practicability has been established beyond doubt by the engines of Gurney, Ogle, Hancock, Maceroni, &c.,) of steam carriages on turnpike roads, and pavements, but could not obtain any facts to satisfy me that they could be used in competition with coaches drawn by horses. Since my arrival in London, the information given induces me to believe they *may*, under favorable circumstances, *in this country*, compete with animal power, but I strongly doubt whether they will answer equally well in our country; and I think it highly probable that, in the course of a short time, they will be much more generally used in England for stage coaches, and for the transportation of the mail. This opinion is founded on the following circumstances; 1st, horses are costly in England, and are maintained at great expense; 2d, the roads are good, and kept in perfect order; 3d, steam power is cheap, owing to the low price of all machines made of metals, as well as the low price of fuel. In our country, on the contrary, horses are cheap, and are supported at one half the cost that is customary in England; 2d, our roads are unfortunately constructed on wrong principles,* and are consequently excessively bad, and will remain so until they are made on a better plan; 3d, fuel and labor are expensive in our country. From the above mentioned circumstances, I think there is some probability of their becoming useful machines in this country, but I cannot suppose they will be profitably employed in the United States. There are, however, some roads and streets on which they *might* be used: for example, between Boston and Salem; between Providence and Pawtucket; from the Battery to the highest part of Broadway in your city; and from the Exchange to the Schuylkill river, in my city; and there may be some other locations, which, however, it is unnecessary to mention, where the roads may be sufficiently good to enable the locomotives to travel on them; but it is out of the question to expect them to travel over turnpikes equally bad as those of my native state, which, although not so bad as in some of the other states, are so rough as to be discreditable to our citizens.

I have written you a few hasty lines, which, however, are at your service, if you wish to make use of them, and if I can do any thing to be useful to your publication whilst in this country, I shall be much pleased to aid in any way you may point out. My address is, care of Timothy Wiggin, Esq., London, or care of A. & G. Ralston, No. 8 South Front street, Philadelphia, by which channels every thing will be carefully forwarded to me. I am, very respectfully, your obedient servant,

Gerard Ralston.

Liverpool, Oct. 24, 1834.

Postscript.—By some oversight, I find that I did not send this communication to you at the time I ought to have done so. The engraving I sent under cover to Messrs. Wm. G. Bull & Co., and requested them to hand it to you. Since the date of my preceding letter, I have made several journeys in the "Autopsy" and "Era," and have not seen nor heard any thing to alter my views as expressed above.—It is, however, proper to mention to you that, from my occupation in this country, viz.: to furnish railway iron, locomotives, &c. &c., for various railroads in the United States, I am frequently brought into company with some of the most eminent engineers of this country, of all of whom I have inquired their opinions respecting the expediency of locomotives on turnpikes—they have invariably replied, "They will not be profitable." They say, "You can see them running on the roads—they go beautifully, and you suppose prosperously, but they work to a disadvantage of 10 to 1 compared with locomotives on railways, and it is impossible for them to supersede horses on turnpikes or locomotives on railways."

Mr. Hancock, who is undoubtedly a man of genius, and is, withal, very quiet and unpretending, appears quite confident that he has succeeded, and that he is now making money. In a few months more, it is probable, if he continues to run, that he will be able to divulge to the public something of an official character, that will satisfy all doubters either of the expediency or inexpediency of this mode of locomotion. The question is no longer one of practicability, but of profit. It is proved to be practicable; but will it be profitable, is the important question. I shall return to London in a few days, and should I hear any thing of importance on this subject, I will have the pleasure to communicate it to you. In the mean time, yours, respectfully,

G. Ralston.

Facts relative to the Use of Steam Carriages on Common Roads, furnished by Mr. G. Ralston.

Called on Mr. Hancock, who gave me information respecting the "Era" and "Autopsy," constructed by him, as follows.

The cost is £700 each. They each have 2 steam engines, of about 10 to 12 horse power, high pressure, and accommodate 14 passengers each. Coke is the fuel used; ½ bushel per mile is consumed, and 100 lbs. of water per mile. The capacity of the boiler is 700 lbs. of water, which would be sufficient for a distance of 7 miles. The weight of the omnibus complete is 3 tons, exclusive of fuel and water. The road and pavement, (from the neighborhood of the Bank of England to Paddington,) over which these carriages travel, is the worst in the neighborhood of London; indeed, I think it the worst road I ever saw in England. The distance is 3 miles on the most frequented thoroughfare in the world, and it is astonishing how perfectly controllable it is, how easily it is guided, how easily stopped—indeed, it is much more controllable than a two horse omnibus. It goes at the rate of 10 to 12 miles per hour, which, for the present, is considered the most economical speed. The Pentonville hill, which these carriages ascend, has a rise of 1 in 20, but the Autopsy has gone over hills on the Brighton road of 1 in 10 feet. There is a hill between London and Brighton of 1¼ mile long, which this carriage ascended at the rate of 9 miles per hour, at the commencement of the rise, and gradually diminished its speed to 6 miles per hour. The "Era" performed the following wonderful feat a few days ago: She dragged the "Autopsy" over the bad road to Paddington, up the Pentonville hill to the station, both carriages being full of passengers. The weight of the two, with their loads, is estimated at near 8 tons.

We learn from the proceedings of the Georgia Legislature, that the bill for the construction of a Railroad from Savannah to Macon, has been rejected in the House; yeas 59, nays 105.

Railroad from Nashville to New Orleans.—A meeting was held at New Orleans on the 20th ult. to consider the expediency of constructing a Railroad from that city to Nashville. A resolution was passed "that the nature of the country between New Orleans and Nashville presents the greatest possible facilities for direct and rapid communication by means of a Railroad, and the nature of the transportation and the number of travellers will fully sustain the expense of such a road." A Committee of twenty was appointed to procure subscribers of $100 each, to an Association having for its object the taking of preparatory measures for the construction of such a Road, —the money to be expended in making examinations and surveys. The distance must be 400 or 500 miles. A direct course from Nashville to New Orleans, would pass through a corner of Alabama, and almost the whole length of Mississippi.

Wabash and Erie Canal.—Five miles of the summit section of this Canal have been completed and are ready for navigation. We learn from the Fort Wayne Sentinel that an additional portion of eight or ten miles will be completed in a few days.

The Great Belgic Railway.—The probability is that the line of road, after passing the lower part of Verviers, will follow the course of the Vesdre by Limbourg to Eupen: then, taking the direction of the Dente, by Cornelis Munster, as far as Eschweiler, will leave Aix-la-Chapelle about a league to the west, and proceeding by Duren and Keryen, will cross the Roer and Erft with several of their tributaries, and traverse the plain of Cologne nearly in a straight line to the Rhine, a distance altogether of about seventy English miles. The company, whose intention it is to commence operations as soon as the Belgic works approach the Prusian frontier, comprise most of the great commercial men and bankers of Cologne, Coblentz, Dentz, Duren, Kerpen, and Aix-la-Chapelle; whence there will be an embranchment to Cornelis Munster. In short, throughout the Rhenan provinces, where there is no other canal than that which connects the Rhine opposite Dusseldorf, with the Meuse at Venloo, and no other mode of transport but by the tedious process of cartage (routag), there is but one opinion and one voice on the subject. The boat-owners and shippers on the Rhine, Moselle, Lahn, Main, and Aar, are no less desirous for its success; for the natural consequence must be to render Cologne the great depot both for colonial and inland produce, and consequently to transfer the water-carriage monopoly from the hands of the Dutch into that of the Prussians.—[Letter in the Morning Chronicle.]

The Indian rubber tree of South America grows 4 and 500 feet high, and expands to a proportionate breadth. Another valuable tree of that continent is the cow tree, whose leaves always appear withered and unsightly, but which produces vast quantities of liquid aliment, resembling milk. The natives obtain it by boring the trunk.

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* To prevent misconception, it may be proper to mention in what respects our turnpikes are defective. 1st, They are too *convex*; they rise too much from the sides to the centre, and the consequence is that all the travel is forced on to the crown of the road, which is soon worked into *four ruts*, two of which are formed by the two horses' feet; the other two by the wheels of the carriages; but if the roads were nearly flat, as they are in England, the travel would be equal over the whole surface, and then every part of the road would be equally good. The 2d defect is the *metal* is not homogeneous, (hard and soft stone ought never to be used together,) and not broken sufficiently small. The 3d defect is the absence of sufficient under-draining. On our turnpikes, and indeed even in our streets, I have seen *uncovered drains* across the roads, which of course cause an inequality of the surface, and injure the carriage and horses, and interfere with the comfort of the persons in the carriage. I hope most sincerely my countrymen will "mend their ways;"—they are now abominable; and it would not be more expensive to make roads equally good as those in Great Britain and Sweden, than to make them in their present bad condition.

Annual Report of the Superintendant of Machinery of the Baltimore and Ohio Railroad.

Office of the Superintendent of Machinery,
Oct. 1st, 1834.

To Philip E. Thomas, President, etc.

In accordance with the rules and regulations for the government of the officers and agents of this Company, I now respectfully submit the following Report of the operations of the department of Machinery, for the year ending on the first day of the present month.

The subjects that engage the attention of this department are every day assuming a deeper interest. There is, perhaps, a point in the improvement of the construction of machinery beyond which human ingenuity cannot reach: but no man, at this time, can designate that point. In the other departments, connected with the general system of Rail Roads, there is a degree of perfection which cannot be passed, and every one can perceive it. In the graduation, the straight line without curvatures, without elevations or depressions, is not only conceivable, but, if means adequate to the accomplishment of the object, by bridging rivers, cutting through hills, or tunnelling mountains, and filling up valleys, be applied, it is perfectly practicable. But in the construction of machinery the case is very different. Here, improvements are every day taking place; not by the discovery of new mechanical powers, but by new and, seemingly, endless combinations of them. The application of these powers and principles are, in fact, so varied, and so complicated, that no mechanical attainment has sufficiently penetrated the arcana of science, to fix their ulterior limits, and say, thus far shall invention advance, and no farther. There is, then, a boundless field open to the machinist. Many discoveries have been already made by bold and ingenious adventurers. Much has been done in the last and present century, and advances have been made, which, 60 or 80 years ago, would have been deemed chimerical. To say nothing of the improvements in chemistry, and the corelative arts, nor of the endless variety of machinery employed in manufactures, the application of the power of steam, and the various and important uses to which it has been rendered subservient, from the ponderous and capacious steamboat to the smallest engine, substituted for animal or water power, challenges the wonder of the ignorant, elicits the congratulation of the learned and of the friends of science, and excites the emulation of mechanicians to make still further discoveries in a field that is yet inexhausted, and, so far as appears, is inexhaustible.

The locomotive engine dates its birth but a few years back; yet, young as it is, it has already acquired much of the vigor and activity of adolescence; what may not then be expected, when it shall have attained to the steady, firm, untiring step of mature age? The voice of experience, even on the Baltimore and Ohio Rail Road, proclaims that great advances have been attained in the construction of locomotives, from the first efforts made by the Company, as well as by others, who, at their own expense and risk, entered the field of competition.

Although the rail road system originated in England, yet it was very evident that the best constructed machinery, in use there, was exceedingly defective; and that unless several material improvements could be effected in the parts most liable to wear, and also in the construction of locomotive engines, the expense, arising from repairs and renewals, would seriously affect the success of the railroad here. Our attention, therefore, was, from the first, especially directed to the improvement of this all-important branch of the system, and our progress has been considerable, in every particular. A great reduction of friction, as well as of the consumption of oil, has been attained, and a degree of permanence given to the road wheels, which has, it is believed, never heretofore been effected. Some of these have traversed a course of about 24,000 miles, without exhibiting evidence of being perceptibly impaired. This permanence is owing to an increase in their weight, and to the introduction of a strong wrought iron ring into the interior of the rims of the wheel, and a more perfect chilling or case-hardening of its periphery, especially the conical part of it.

In the year 1830, Peter Cooper, Esq., illustrated, by an experiment, with a small working locomotive engine, with a tubular boiler, the practicability of using Anthracite coal as fuel. Subsequently, Phineas Davis, in conjunction with the engineers and machinists of this company, has, by a series of experiments, introduced several essential improvements, resulting in a triumphant success and in the construction of locomotive engines of great power, strength and durability. Several of these have been put in operation upon the Baltimore and Ohio Rail Road, and their performance has exceeded the expectation of the most sanguine, being decidedly greater than that of any other engine of similar weight yet known. Anthracite coal is exclusively used as fuel, being not only more economical, but is found to emit neither smoke nor burning particles, so annoying to passengers, and so universally complained of in the engines of the usual construction.

In several particulars these engines differ essentially from those heretofore in use. They are more compact, and have a greater fire surface in a more limited space—the powerful fanning apparatus, impelled by the waste steam, pouring a constant and impetuous stream of air through the furnace, and always ensuring the combustion of the Anthracite coal—the ingenious contrivance by which the waste steam is applied, to heat the water, in its passage from the supply pipe to the boiler, and the manner of protecting the principal part of the machinery from the irregular action of the road wheels, constitute together, striking features in this admirable specimen of American invention and ingenuity.

The workmanship in all the engines, recently constructed at the manufactory of the Company, exhibits considerable improvement; the materials of which they are composed are of the first quality, and all the principal points subject to wear have been rendered more permanent by case-hardening.

As an evidence of the durability of these improvements, the Arabian locomotive engine continued to run 50 days between this city and the Inclined Planes, a distance of 82 miles, daily, making 4,100 miles, without requiring repairs or showing any perceptible wear or deterioration.

As the ultimate success of the enterprise mainly depended upon the employment of engines adapted to the curvatures of the road, and to the use of Anthracite coal, and of such a permanent construction as would not require frequent repairs, it cannot fail to excite the highest gratification in the friends of the measure, that so signal a triumph has been achieved, in the production of those machines possessing these properties in so eminent a degree.

The machinery now on the road, and in active use, is as follows:

Locomotives.—1st. The Atlantic, now undergoing an alteration, which will render her equal in power to the other engines more recently built.

2nd. The Traveller, employed in the transportation between the Mount Clare depot and Ellicotts' Mills, of passengers and of goods.

3d. The Arabian, which continued for 50 days, in succession, to run from the depot to the Plains with the Frederick train of passengers cars, the daily expense being as follows:

Coal, 1¼ tons, at $6 per ton,	$7 50
Engineer,	2 00
Assistant do.	1 50
Oil,	50
Interest on cost,	75
Contingencies,	1 00
	$13 25

To this it will be safe to add three dollars per day for repairs that may become necessary to maintain the engine in good order.

4th. The Mercury, of the same power as the Arabian, has been running 20 days at the same daily expense as stated above.

The abovementioned four engines were built by Phineas Davis; who, from his first effort in constructing the York, to the full attainment of the Herculean powers of the Arabian and Mercury, has made rapid advances in perfecting these machines, affording encouraging prospects of still farther improvements. As far as the experiment has been made, the cost of transportation is lessened, and it has already been ascertained that when steam power shall be so far employed as to enable us to dispense with horse power, the balance will be found materially to preponderate in favor of the former.

Four new passenger cars have been constructed during the present year, viz.

1st. The Winchester, carrying 36 passengers, on 8 wheels.

2d. The Dromedary, a large and commodious car, 8 wheels.

3d. The Comet, a car with 5 bodies, carrying 40 passengers, 8 wheels.

4th. The Patterson, on 4 wheels.

Four of the old cars have been repaired, and placed upon 8 wheels.

All the other cars are in a respectable state of repair, and will probably do service through the ensuing winter, with but little additional expense.

The number of burden cars now in the service of the Baltimore and Ohio Rail Road Company is 1,000, exclusive of 27 employed on the Washington road.

The passenger cars hitherto in use, on this road, generally resembled, in many respects, the usual stage coaches—most of those built within the present year are materially different from them in appearance and arrangement—the bodies are long, and supported on 8 wheels, which are so placed as to pass the curvatures of the road with greater facility than the ordinary kind of car. These are not only more commodious, but they afford additional security to the passengers; they are simple in construction, and very strong, and consequently will seldom require any repairs, by which a great saving will be effected. During the time these carriages have been in use, several further improvements have been suggested, and a plan is now adopted, which, it is thought, when introduced, will be very safe and commodious, and meet the public approbation.

The total number of passenger cars now in the road is 34.

The ten passenger carriages, ordered to be built for the Washington Rail Road, and which, when completed, will convey upwards of 350 passengers, comfortably, are now under construction, and will be ready for service, as will also the four new locomotive engines intended for that road, by the time it is finished.

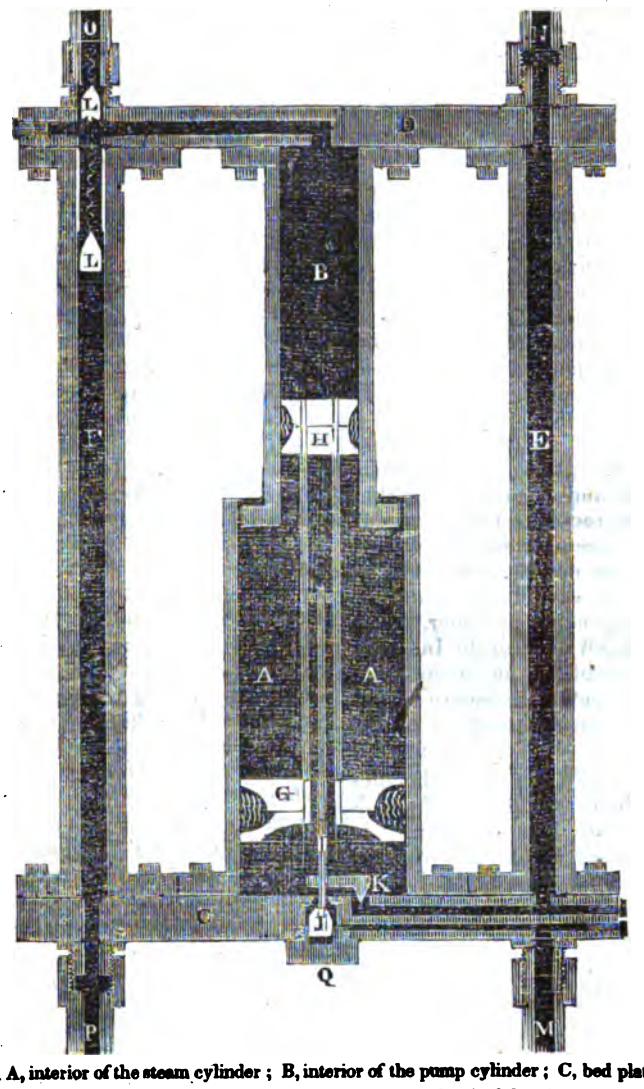
In relation to the duration of wheels, it may be stated that those with metal rings in them, upon the following named passenger coaches, have performed, as underneath, whilst several of the same wheels present but little appearance of deterioration, viz.:

			Miles.
President,	309 days.,	82 miles per day,	25,338
Virginia,	300 do.	" "	24,600
Alleghany,	290 do.	" "	23,780
Shenandoah,	259 do.	" "	21,238
U. States,	240 do.	" "	19,680
Pioneer,	220 do.	" "	18,040
Maryland,	240 do.	" "	18,450
		7)	151,126
		Average,	21,589

Respectfully submitted,

George Gillingham, Sup't of Machinery,
B. & O. R. R.

SECTIONAL VIEW OF R. PORTER'S INDEPENDENT PUMP.



Explanation.—A A, interior of the steam cylinder; B, interior of the pump cylinder; C, bed plate; D, cap plate; E, steam column; F, water column; G, steam piston; H, pump piston, and head of the piston rod; I, valve rod, where it passes through the cross spring; J, induction valve; K, eduction or exhaust valve; L L, pump valves; M, steam pipe; N, exhaust pipe; O, suction pipe; P, injection pipe; Q, short screw, which closes the valve chamber.

Improved Forcing Pump.

To the Editor of the Mechanics' Magazine:

Sir,—Permit me to inform the public, through the medium of the Mechanics' Magazine, that I have recently constructed, and have now in successful operation, an improved forcing pump, which will invariably keep the boiler of a steam engine supplied with water, to a given and uniform height, without ever permitting it to rise above; acting independently of the steam engine, being operated directly by steam from the boiler; and keeps the boiler as well supplied, while the engine is at rest, and even while blowing off steam, as at other times; and that without any attention from the engineer. I have made arrangements to have them manufactured to order, (warranted, of course,) by Mr. D. Copeland, Hartford, Conn.

Specification.—A hollow cylinder, four and a half inches in length, and two inches in diameter, having a flange at one end, is placed in a vertical position on the centre of a horizontal plate, which is six inches long, three inches wide, and half an inch thick, and to which the cylinder is secured by screws, passing through the flange into the plate. On the two ends of the plate are two vertical columns, each being eight inches in length, and three-fourths of an inch in diameter; and having a flange at each end, and an orifice three-eighths of an inch in diameter in the centre, are likewise secured to the plate by screws; and, in like manner, the heads of the columns are attached to another similar plate which rests on them. Another cylinder, four inches long, and one inch in diameter, is also attached by flange and screws to the centre of the under side of the cap plate, so that the bottom of this cylinder comes within, and, having a flange of the requisite size, closes the top of the cylinder first mentioned.

Within each cylinder is a piston with suitable packing, and the two pistons are connected by a hollow rod, five inches long, and half an inch in diameter; each piston occupying one inch of the end of the rod, thus leaving a space of three inches between the two. Within the piston rod is a valve rod, three and a half inches long, and one-eighth of an inch in diameter, having a flange head at the top: not so large, however, but that it will pass freely within the hollow of the piston rod. The other end passes downward, through an aperture in the centre of the bed plate, into a valve chamber, which consists of an orifice of half an inch diameter, extending upward from the bottom of the bed plate to within an eighth of an inch of its upper surface, and being closed at the bottom by a short screw, which also has a cavity in the end, the better to accommodate the valve. From one end, and near the bottom of the bed plate, an orifice an eighth of an inch in diameter is drilled horizontally to the valve chamber. Directly over, and parallel to this, is another orifice, which extends nearly to the valve chamber, where it meets with a vertical aperture from the upper side of the plate. These orifices are both closed at the outward end, but the first has a vertical communication with a small steam pipe, which is attached by an union joint to the bed plate, directly under the column, (which is called the steam column,) and the other has a communication upward, by another aperture, through the steam column, to another pipe, which is attached to the upper side of the cap plate.

Several small apertures, nearly in contact with that in the centre of the bed plate, complete the communication between the steam pipe and the steam cylinder; and these are closed occasionally by a circular or conical valve, three-eighths of an inch in diameter, which is attached to the bottom of the valve rod. Another conical valve is attached to an arm which projects from the valve rod an eighth of an inch above the upper surface of the plate; this valve occasionally closes the aperture which communicates with the steam columns; thus, the same motion of the valve rod, which closes one valve, opens the other. A thin elastic spring, two inches long, and half an inch wide, extends horizontally across the bottom of the steam piston, (which is a little concave,) being fastened to the piston by a screw at each end; and the valve rod passes through the centre of the spring. Thus, when steam is admitted, and drives the pistons upward, the spring receives the flange head of the valve rod, and, by raising it, instantly shuts off the steam; and, at the same time, raises the other valve, and thus allows the steam within the cylinder to escape by way of the steam column. From the upper side of the steam piston, two small rods, opposite and parallel to each other, extend upward through the bottom flange of the small cylinder, and through the cap plate; to the heads of these rods is attached a weight or spring, by which the pistons, when relieved from the action of the steam, are again forced down; and, by this motion, the horizontal spring comes in contact with the exhausting valve, shuts it down, thus opening the other, which again admits the steam to the cylinder.

Two other pipes, (water pipes,) are attached by union joints to the two plates, the one above and the other below the other column, which is called the water column, with which they communicate by apertures through the two plates. The cap plate is perforated horizontally from the aperture to the centre, thence downward, thus opening a communication between the water column and the small cylinder. Within the water column is a puppet valve, and above it, near the upper surface of the cap plate, is another; both of which are held to their seats by spiral springs, opening downward, so as to admit the descent, but prevent the ascent, of water through the column and pipes. (The whole apparatus may be inverted, however, which would preclude the necessity of spiral springs.) By this arrangement, when the pistons are moved down, the small cylinder is filled with water from the upper water pipe, which communicates with a reservoir; and when the pistons are moved upward, the water in the cylinder is forced down through the water column to the boiler. Thus, by

the force of steam, emitted from the boiler by one pipe, water is injected by another. Another advantage is derived from having the steam pipe descend to the proper water line in the boiler; that whenever the water, by the injection of the pump, rises above said line, the water is forced up in the steam pipe, and thus chokes the valves and retards the motion of the pump, while the water, thus escaping, is forced through the exhaust pipe, which also terminates in the reservoir.

I claim as original the construction and arrangement of the plates, cylinders, columns, and valves; and the application of steam direct to operate a pump, as connected with the regulating principle derived from the descent of the steam pipe to the water line as above described.

RUFUS PORTER.

Supplemental Report of the Seventh Annual Fair of the American Institute.

The managers, anxious to do exact justice to the exhibitors, and to correct any errors that may have occurred in the confusion incident to a public exhibition, where more than five thousand articles were presented, have deemed it proper to make a supplemental report. They have been induced to do this, partly in consequence of certain facts having been brought to their knowledge since the exhibition, which, if known, would have varied their award. The extent of the fabrication of certain other articles of great utility, and of general consumption, demand a more pointed public notice than was given in the original report. They are satisfied of this, also, partly from information obtained since the exhibition, as well as from a careful review of the reports of the judges.

The case of incorruptible artificial teeth will first be noticed.

When the judges on these articles first met and reported, specimens from only two exhibitors had arrived. Afterwards, S. W. Stockton brought other specimens, and challenged competition. The successful competitor in the first instance consented to enter the list of competition again, and thereby waived the advantage he had acquired by the decision of the judges at their first meeting. At their second examination, the decision was unanimous in favor of Stockton's specimens. But the fact of this mutual agreement, and the waiving on the part of the party interested in the first decision of the judges, not having been positively ascertained, no notice was taken by the managers of either decision in the awarding of premiums. But the judges having subsequently certified that the last examination was with the consent and approbation of the successful competitor in the first instance, the managers have deemed it due to Mr. Stockton that he should be noticed; they therefore award to S. W. Stockton, of Philadelphia, a silver medal, for the best specimen of highly perfected incorruptible artificial teeth. And inasmuch as J. Plantou & Sons, of Philadelphia, exhibited the second best specimens, at both examinations, the managers award to them a diploma.

The managers have carefully examined into the extent and importance of the manufacture of watch dials, by Mullen & Ackerman, No. 101 Warren street, city of New-York. The accuracy and elegance of the workmanship, the facility with which they can be multiplied, the great demand they are competent to supply, and the saving effected for the consumers, entitle them, in the opinion of the managers, to a gold medal, in lieu of the silver medal heretofore announced, as the "reward of skill and ingenuity for the manufacture of gold watch dials."

And the managers also award to Mullen & Ackerman, a diploma, for handsome specimens of filagree jewelry.

Mr. T. Fossard's specimen of blue dye, the committee deem important. A cheap substitute for indigo would be of incalculable value; and the examinations the specimen underwent have made a favorable impression on the minds of the managers. They therefore did not hesitate to award him a diploma.

Matthias Ludlum, a journeyman mechanic, produced a beautiful brass tea-kettle and heater, which were made, by the consent of his employer, expressly for the Fair. They were exhibited in the name of D. E. Delavan, who, for these and other articles taken by him to the Fair, received a silver medal. Mr. Ludlum has since applied, and claimed the premium. It is desirable that the rewards of the Institute should, as far as possible, reach the ingenious producer, where he is brought to a knowledge of the Institute. The managers, therefore, in accordance with the desire to reward obscure merit, award to Matthias Ludlum a silver medal, for a beautiful brass tea-kettle and heater.

Choice specimens of turned tool handles were exhibited by N. Cowenhoven. Mr. C.'s manufactured tools are sold extensively in this city; he is entirely self-taught, and deserves a public notice for his ingenuity. The managers award to him a silver medal.

The managers also award to Alfred Willard, of Boston, a diploma for shell worked combs, elegantly carved.

To Francis Smith, for brass shovel and tongs, made by him, and delivered by Mr. Delavan at the Fair, the managers award a diploma.

They also award to Geo. Bird a diploma for imitation mouldings.

Miss Sarah Seager, 233 Thompson street, is entitled to praise for a handsome flower-piece, painted in oil. The managers award her a diploma.

Specimens of cut and pressed glass from the Union Glass Company, Philadelphia, were worthy of commendation.

Post's hame-collar block has met with much commendation.

Robert Fazon's improved cooking stove has also been highly approved; sold at No. 13 Bowery. A diploma is awarded him.

James Van Dyke, Brooklyn, Long Island, exhibited samples of excellent mustard made by him. It is hoped, as an American article, it will find favor with American consumers.

Messrs. E. & T. Fairbanks exhibited their patent portable scales, which are a convenient and excellent article—for which a diploma was awarded. A specimen model may be seen at the office of the Institute, No. 41 Cortlandt street.

T. W. Clisby, No. 12 Tenth street, exhibited an ingenious architectural engraving of the Ionic capital of the temple of Ilyssus, as described by the inventor. The illustrations profess to shew the centres of the spiral scrawls of the volute, and to prove that they accord with mathematical principles. The engraving may be seen at No. 41 Courtlandt street.

A specimen of Asiatic marble, of the Breccia species, imported in its rough state, hewed and polished in this city—a beautiful article. Exhibited by Warren Gould. A diploma.

The managers have already granted to Obadiah Parker a gold medal for his artificial stone, and for the purpose of enabling him to make more public his discovery, they have, at his request, also awarded him a diploma.

To Charles Edwin Ely is also awarded a diploma for a finished specimen of ornamental writing engraving.

The managers award to Kutz & Adams, No. 300 Broadway, manufacturers of rules, mathematical instruments, &c., a silver medal, for two drafting scales, and two engineer sliding rules: specimens exhibiting great skill, accuracy, and elegance. An accompanying explanatory book shows the application of the different rules to multiplication, division, rule of three, tables of the areas and circumferences of circles, mensuration of superficies and solids, weighing of metals, &c.: a happy illustration of mental labor saving. They may be seen at the Library of the Institute, 41 Cortlandt street.

The managers, in accordance with the wishes of the Denny Manufacturing Company, and deeming the progress of the manufacture of the kind of articles exhibited by them of national importance, award to the said Company for their specimens of superfine black and blue broadcloths, *in* lieu of a gold medal, a silver pitcher.

The fanlight of T. Thomas—vitrified glass, displaying the American arms surrounded by the stars of the 13 States within a tri-colored border—deserves particular commendation for elegance of execution. The long lost but beautiful art of staining glass is revived and executed in New-York with a degree of perfection not surpassed perhaps by any of those relics of former times that have reached us. Mr. Thomas's specimen may be examined at No. 41 Cortlandt street.

Miscellanies, Foreign and Domestic.

[Continued from page 676.]

12. *Carrageen, or Irish Moss.*—Chondrus crispus, Lyngbye, Hydropt. Dan. p. 15, t. 4. Greville, Algæ Brit. p. 129, t. 15. Sphaerococcus crispus, Agardh, Sp. Alg. 1. p. 256. Fucus crispus, Lin. Syst. Nat. ii. p. 718. Turn. Hist. Fuc. p. 216-7.

This moss is common on rocks and stones, along the coast of Europe; it is also a native of the United States. A very variable species, but easily recognized when the eye is accustomed to it. The genus Chondrus belongs to the order Florideæ of the great natural family of the Algæ. All the species have a cartilaginous frond, which is flat, without nerves, dichotomous, dilated at the extremity, and of a livid reddish color; the fructification consists of scattered capsules, mostly immersed in the frond, rarely pedicellate; seeds minute, rounded.*

This moss, abounding on the southern and western coasts of Ireland, has been used by house painters for sizing; it has likewise been highly esteemed by the inhabitants as a dietetic remedy for various diseases, more especially for consumption, dysentery, rickets, scrofula, and affections of the kidneys and bladder. Dissolved by being boiled in water, a thick jelly is produced, more pure and agreeable than that procured from any other vegetable, which is found to agree better with the stomach than any prepared from animal substances. Its chemical composition appears to me, as far as

* I am indebted to Dr. John Torrey, for the communication of the botanical description.

I have been able to trace it, of very considerable importance; the jelly formed by dissolving it in hot water is not only composed of starch, but contains a large proportion of pectic acid; a considerable quantity of sulphur, and some chlorine and bromine, and another acid combined with lime, have been discovered,—the latter proves to be the oxalic acid.

Neither the fungic nor boletic nor lichenic acids could be detected, and the existence of iodine I have not been able as yet to detect. By extracting the pectic acid with caustic potassa, I found the moss taken up and altogether dissolved; and after treating the gelatinous mass with chloride of calcium, muriatic acid, and applying alcohol to separate the acid, at least 0·6 of this last was the result.

By reducing the moss to coal and dissolving it in water, sulphuretted hydrogen gas was evolved very abundantly; protoxide of iron, subcarbonate of potassa, diluted sulphuric acid, and lime water, gave copious precipitates.

The chemical characters of this moss are too interesting to be considered as completely determined by the few superficial experiments undertaken to discover its properties, especially as they were made at a time when I have been continually interrupted by an attention to the duties of my profession, and I consider them as having been undertaken more for the satisfaction of my curiosity, than as tending to a complete and scientific investigation of such an invaluable medical substance as carrageen, but I hope to be able very shortly to develope with more accuracy the entire composition of this singular moss.

The carrageen seems to possess qualities similar to the Iceland moss, which, according to Berzelius' last analysis, (a master-piece in every respect,) consists in 100 parts of 3·6 syrup, 1·9 bitartrate of potassa, tartrate and some phosphate of lime, 3·0 bitter principle, 1·6 green wax, 3·7 gum, 7·0 coloring matter, like extract, 44·6 lichen starch, 36·2 starch-like matter; but carrageen is without bitter principle, contains nothing but soluble matter, and the quantity of nutritious jelly produced by a small portion of it gives it the most indisputable preference. It was first introduced by Dr. Reece, who considered it a most important article of food for invalids, and Doctors Sulby, O'Reilly, and Sir Henry Halford, speak of the carrageen as the most nutritious article of food for delicate and weakly children. In this respect it is certainly superior to arrow root, sago, &c., being more highly nutritious, easy of digestion, and pleasing to the taste.

Prepared with warm milk and sweetened, it is most particularly recommended as a breakfast for consumptive patients.

Decoction of moss, made by boiling half an ounce clear moss in a pint and a half of water or milk until reduced to a pint, is recommended as food for children affected with scrofulous or rickety diseases, for such as are delicate and weakly, and for infants.

There are some printed directions for the manner of using the carrageen moss for medicinal and culinary purposes, accompanying some imported from England, from which I shall make here an extract.

Directions for using the Moss medicinally.—Steep a quarter of an ounce of moss in cold water for a few minutes—then withdraw it, (shaking the water out of each sprig,) and boil it in a quart of new or unskimmed milk, until it attains the consistence of warm jelly—strain and sweeten it to the taste with white sugar or honey, or, if convenient, with candied Eryngo root; should milk disagree with the stomach, the same portion of water may be used instead. The decoction made with milk is recommended for breakfast for consumptive patients; and with water will be found a most agreeable kind of nourishment, taken at intervals during the day, the flavor being varied with lemon-juice or peel, Seville orange juice, cinnamon, or wine of any sort most congenial to the taste.

The decoction in water is also taken for the relief of cough at any time in the course of the day, when it is troublesome, and it is for this purpose simply sweetened with honey.

In dysentery, the decoction, either in milk or water, may be administered with equal advantage, and in addition to the sweetening matter, if a tea-spoonful of the tincture of rhatany be mixed with each cupful of it, tone will thereby be given to the intestines, at the same time that nourishment will be conveyed to the system, and irritation prevented—a large tea-cupful of the decoction may be taken three or four times a day.

As a pleasant strengthening food, boiled with milk and strained, with the addition of a little sugar, it is unrivalled for infants. Persons take it in this way for breakfast or supper, with the happiest effect, who are sustaining an attack of the cholera.

Culinary Directions.—To make Blanche-Mange: take half an ounce of moss, and having cleansed it by the process above described, boil it in a pint and half new milk, until it is reduced to a proper thickness to retain its shape; to be sweetened and flavored with lemon, white wine, or any thing to suit the palate.

To make Orange, Lemon, or Savory Jellies: use a similar process, substituting water for milk—add lemon, orange, herbs, &c. according to taste.

To make White Soup: dissolve in water, afterwards add the usual ingredients.

It only remains to state, that the Carrageen, or Irish Moss, as a domestic article, is peculiarly interesting; it is the best thickener of milk, broths, &c., makes excellent jellies, and for Blanche-Mange is equal to most expensive ingredients, whilst the cost is comparatively nothing; it may be used instead of isinglass, jellies, &c.

13. *Oil of Copaiva as a test for the purity of the sulphuric ether.*—If ether is not fully deprived of water and alcohol, it forms when united with oil of copaiva an emulsion without dissolving it completely, whereas it is soluble when pure, in every proportion.

14. *Discharge of the stain of indelible ink, by corrosive sublimate.*—Dr. John Dickson, of South Carolina, in a letter to the editor, dated October 24, 1833, states that Mrs. Dickson had accidentally observed the discharge by corrosive sublimate from a handkerchief of the color produced by the nitrate of silver, and it was soon found that the same effect was produced upon linen, cotton, and the human skin. On the cloth* the stain partially re-appeared after washing, but on the skin it did not return.

The following circumstances led to Mrs. Dickson's observation: a weak solution of nitrate of silver, (warmly recommended in Eberle's Practice,) was used as a lotion in treating some cases of erysipelas; its power of producing a dark tint was well known to Dr. D., but as no caution is given in the above work, it was presumed that no such consequence would follow from using so weak a solution: but Dr. D. had the mortification to find the effect produced, and a solution of corrosive sublimate was then successfully applied to remove the stain produced by nitrate of silver. The following suggestions are made by Dr. D.:

1. Not to use the nitrate on the face at all, especially in the case of females.

2. To take care that the solution reach only the portions of the surface that are in a state of erysipelatous inflammation, since there is reason to believe that it is less likely to stain the inflamed part, and, at any rate, vesication, desquamation, or absorption will soon remove the skin and stain together in the diseased surface, while this will not happen so soon in the healthy portion. Of course this is not of so much importance in parts habitually covered by the dress.

3. To have the parts to which the nitrate is applied protected from the light during the use of it.

4. To wash away the solution before it dries in the least from the fingers, &c. dipped in it in making the application. This may be done in common clean water, and if not effectually done in that, it may be certainly done in a weak solution of corrosive sublimate, as appears from our experience.

* It is not specified what cloth is intended, but it is presumed that it is the fibre of the linen and cotton.

Crystalline Lenses.—Sir David Brewster, a very distinguished writer on the science of optics, is desirous of procuring crystalline lenses, or, in other words, magnifying glasses of the eyes of American animals. Put the entire eye into a well corked and sealed bottle of spirit, or take the lens from the globe, and throw it for a few minutes only into boiling water. When taken out, dry it and wrap it in paper, writing upon it the name of the animal to which it belonged.—[Scientific Tracts.]

Frogs.—On exposing frogs to the temperature of 0° cent. 32° Fahr., in humid air, in order to suppress perspiration by evaporation, they lost by transudation, in different experiments, the thirtieth part of their weight. Transudation is more abundant in these reptiles than in man, though the latter may be placed in circumstances much more favorable.—[Ibid.]

Animal Power.—Dupin states, that the animal power in Great Britain is eleven times as great as the manual power, while in France it is only four times as great.

The following is the number of horses for every 1000 inhabitants in the countries mentioned. Hanover, 193; Sweden, 145; Canton de Vaud, in Switzerland, 140; Great Britain, 100; Prussia, six Provinces, 95; France, 79.—[Quar. Jour. of Agr.]

Method of Building Chimneys that will not Smoke.—Contract the space immediately over the fire, so you may be sure of the air being well heated *there;* this will ensure a current upwards. All chimneys should be carefully built, and every joint well filled with mortar, so as prevent communication in case of fire.—[Dr. Thomas Cooper.]

Feather Beds.—The want of feathers is altogether artificial, arising from a disregard of the physical and moral well-being of infants and children; and he who has the good fortune never to have been accustomed to a feather bed, will never in health need or desire one, nor in sickness, except in cases of great morbid irritation, or excessive sensibility, or some disease in which the pressure of a firm or elastic substance might occasion pain. But when a rational regard to the preservation of health shall pervade the community, feathers will no more be used without necessity, or medical advice, than ardent spirits will be swallowed without the same necessity or advice. The physician has frequent occasion to see persons who are heated, sweated, and enfeebled, by sleeping on feathers, as if from a fit of sickness, enervated, dispirited, relaxed, and miserable.—[Med. Intel.]

Cure for Weak Eyes.—Take a small lump of white copperas, say about the size of a pea; put it in a small phial, holding about two ounces of water: carry this in the pocket, and occasionally taking out the cork, turn the phial upon the finger's end, and thus bathe the eyes. This will positively effect a real cure in a short time.

Potato Starch.—Let the potato be taken and grated down to a pulp, and the pulp placed upon a fine sieve, and water made to pass through it; the water will be found to have carried off with it an infinite number of particles, which it will afterwards deposit in the form of white powder, separable by decantation, which powder is starch, possessing all the essential properties of wheaten starch.—[Loudon.]

IMPORTANT INVENTION.—We have just seen the model of a vessel, constructed on the principle of a steam packet, propelled by paddles, but, from its peculiar mechanism, it completely supersedes the necessity of steam. The given power is communicated by four revolving sails, (gigot shape,) placed over the centre of the boat, which are acted upon by the wind from any point whatever, without in the least interrupting the progress of the vessel. The serious consequences often arising from the effects of sudden squalls are hereby completely obviated, from the accelerated horizontal action which the sails acquired, one counteracting the weight of the other in a direct ratio. This invention will also be of infinite utility in the construction of mills used in every description of manufacture. In fact, we deem it one of the most important discoveries of modern times. The inventor, Mr. John Willis, of whose talent and genius we have often spoken, intends taking out a patent for the discovery.—[Wexford Independent.]

TELEGRAPH SCIENCE.—The increasing utility of this very interesting science has become a subject of considerable notoriety. From an authenticated statement of the annual reports of the establishment at the observatory on Central wharf, in this city, the following results are communicated for the information of its numerous patrons.

Vessels telegraphed from 1824 to 1825,	799
" 1825 to 1826,	897
" 1826 to 1827,	923
" 1827 to 1828,	1010
" 1828 to 1829,	1309
" 1829 to 1830,	1435
" 1830 to 1831,	1583
" 1831 to 1832,	1809
" 1832 to 1833,	1856
" 1833 to 1834,	1922
Total number announced by telegraph,	13,543

We understand that, during the above period, fifteen hundred sail of vessels, including the government vessels of war and the revenue cutters, have adopted the use of the telegraph flags.—[Scientific Tracts.]

LOVE OF SCIENCE.—A distinguished English missionary, located in India, has such an ardent love of botany, (though it would seem from the volumes of learned translations he has made, that he had no time for any other employment,) that his garden is enriched with every plant and tree that can be made to grow in India. It is still more remarkable, that he can readily call each one by its appropriate technical name. His house is fitted up with shelves, on which are plants, minerals, shells, and groups of cages filled with living birds.—[Ibid.]

RUINS OF ARAXES.—It was in this very ancient city, then in the meridian of its architectural splendor, and the pride of Persia, that Alexander and his Greeks sung, and danced, and revelled. At the present moment, the massive ruins only faintly express its former grandeur and magnificence. Martyn, the missionary, the last visitor whose remarks we have consulted, says, "I saw no appearance of grand design any where. The chapiters of the columns were almost as long as the shafts, though they are not so represented in Niebuhr's plates; and the mean little passages into the square court or room, or whatever else it was, make it very evident that the taste of the Orientals was the same 3000 years ago that it is now."—[Ibid.]

NEW-YORK AMERICAN.

DECEMBER 6—12, 1834.

LITERARY NOTICES.

DEFENCE OF THE REVOLUTIONARY HISTORY OF NORTH CAROLINA FROM THE ASPERSIONS OF MR. JEFFERSON: by Jo. SEAWELL JONES, *of Shocco, N. C.*, 1 vol. *Boston*, CHAS. BOWEN; *Raleigh, N. C.*, TURNER & HUGHES; for sale in *New York* by D. APPLETON & Co.—Though unfortunate for the fame of Mr. Jefferson, it is fortunate for the cause of Truth, that the papers of that "Patriarch of the Democracy"—as he is sometimes styled—fell into the hands of a descendant who felt himself bound or impelled to publish them *in extenso*, without culling and without any attempt to reconcile, what indeed is utterly irreconcileable, their discrepancies and contradictions.

The signal vindication by Major *H. Lee*, of his father's name from the "aspersions" of Mr. Jefferson, and his successful carrying of the war into the enemy's country, was the first in the series of marking publications called forth by the four volumes of the writings of Thomas Jefferson—others followed; and we have now before us another able refutation of one of Mr. J.'s sweeping denunciations of rival contemporary politicians.

In the year 1819, John Adams enclosed to Mr. Jefferson an extract from a Salem paper, purporting to give, as then recently discovered in North Carolina, the copy of a "Declaration of Independence" adopted by Mecklenburg county, in that State, on the 20th May, 1775—more than a year before that adopted by Congress—and called his attention to it as a most able paper, expressing his surprize and regret, at the same time, that it had not been known to him before.

In reply, Mr. Jefferson treats this paper, which Mr. Adams evidently deemed genuine, as "spurious"—assimilates it to some absurd quiz about "a volcano" said to have broken out in North Carolina; and, moreover, speaks disparagingly of Mr. *Hooper*, and other Delegates from North Carolina, in the Continental Congress, whose exertions are commended in the said Declaration. Upon this hint speaks Mr. Jones—a worthy son of so honest and patriotic a State as North Carolina—and we may say with entire truth, that he does most successfully illustrate the unquestionable claims of his native State, of many of its individual sons, and of Mr. Hooper in particular—to the gratitude and admiration of the Union for their untiring services at every period of the Revolutionary war, to the common cause.

As to the authenticity of the Mecklenburg Declaration, it is put beyond all doubt, by the evidence adduced. We have not room for even a summary of this evidence; and must, therefore, content ourselves with repeating that it seems to us *conclusive*, and with referring those who desire to see for themselves, as indeed we would all who interest themselves in authentic American History, to the volume of Mr. Jones.

One single link in the chain of proof we will give—and then publish the declaration itself.—Gov. *Martin*, when flying from North Carolina, and while on board ship in Cape Fear river, issued, on 8th August, 1775, a royal proclamation denouncing the revolutionary proceedings in North-Carolina, from which the following is an extract.

"And whereas I have also seen a most infamous publication in the Cape Fear *Mercury*, importing to be resolves of a set of people styling themselves a Committee for the County of Mecklenburg, most traitorously declaring the entire dissolution of the laws, government, and constitution of this country, and setting up a system of rule and regulation repugnant to the laws, and subversive of His Majesty's Government."

This distinct reference should of itself be deemed decisive—but there are many other proofs of the authenticity of the following—

THE MECKLENBURG DECLARATION OF INDEPENDENCE.—(20th of May, 1775.)—"That whosoever directly or indirectly abets, or in any way, form, or manner, countenances the unchartered and dangerous invasion of our rights, as claimed by great Britain, is an enemy to this country, to America, and to the inherent and unalienable rights of man.

"That we, the citizens of Mecklenburg County, do hereby dissolve the political bands, which have connected us with the Mother Country, and hereby absolve ourselves from all allegiance to the British Crown, and abjure all political connection, contract, or association with that nation, who have wantonly trampled on our rights and liberties, and inhumanly shed the blood of American patriots at Lexington.

"That we do hereby declare ourselves a free and independent people;—are, and of right ought to be, a sovereign and self-governing association, under the control of no power, other than that of our God, and the general government of the Congress;—to the maintenance of which independence, we solemnly pledge to each other, our mutual co-operation, *our lives, our fortunes, and our most sacred honor.*

"That as we acknowledge the existence and control of no law nor legal officer, civil or military, within this county, we do hereby ordain and adopt as a rule of life, all, each, and every of our former laws; wherein, nevertheless, the Crown of Great Britain never can be considered as holding rights, privileges, immunities, or authority therein.

"That it is further decreed, that all, each, and every military officer in this county, is hereby reinstated in his former command and authority, he acting conformably to these regulations. And that every member present of this delegation shall henceforth be a civil officer, viz. a Justice of the *Peace*, in the character of a Committee-man, to issue process, hear, and determine all matters of controversy, according to said adopted laws; and to preserve peace, union, and harmony in said county; and to use every exertion to spread the love of country and fire of freedom throughout America, until a more general and organized government be established in this province.

"ABRAHAM ALEXANDER, *Chairman.*

"JOHN MCKNITT ALEXANDER, *Secretary.*

"Ephraim Brevard	William Graham
Hezekiah J. Balch	John Queary
John Phifer	Hezekiah Alexander
James Harris	Adam Alexander
William Kennon	Charles Alexander
John Ford	Zaccheus Wilson, *sen.*
Richard Barry	Waightstill Avery
Henry Downe	Benjamin Patton
Ezra Alexander	Matthew McClure
Neil Morrison	Robert Irwin
John Flenniken	David Reese
John Davidson	Richard Harris. sen.

Thomas Polk."

No one can read this declaration without admiration for the boldness, which at that early period—when even the most zealous opponents of British oppression, looked only to measures that might induce England to do justice to her colonies, and dreamed not of absolute Independence—prompted these resolute North Carolinians, to throw away the scabbard, and go at once for National Independence.

Neither can any one read it, with a recollection of the language of that Declaration which more than a year afterwards was penned by Mr. Jefferson—without a strong conviction that he had seen this document, that it had furnished him with some of the strongest ideas, and happiest expressions of his draft—and that it was, therefore, a calculation of selfish policy, and in order to conceal unacknowledged obligations that in his letter to Mr. Adams, he treated the whole thing as a quiz.

The reason why this Mecklenburg Declaration does not appear among the archives of Congress, is thus simply explained in a MS. Journal of the Rev. Henry Hunter—who, at the period in question, was, as he records himself, twenty years old—and a spectator of the proceedings, on the day the Mecklenburg Declaration was adopted.

"A copy," says Mr. H's. Journal, "of these transactions was drawn off and given in charge to

Capt. Jack, then of Charlotte, that he should present them to Congress, then in session, in Philadelphia. * * * * * * * On the return of Capt. Jack, he reported that Congress *individually, manifested their entire approbation of the conduct of the Mecklenburg Citizens, but deemed it premature to lay them officially before the House.*"

We must here close our notice of this book, which, though certainly inartificial in its arrangements and topics, in which respects it might be improved, is very interesting to all who desire to see the truth told in American history.

JOURNAL OF A RESIDENCE IN CHINA, AND THE NEIGHBORING COUNTRIES, FROM 1829 TO 1833. By DAVID ABEEL, a *Minister of the Reformed Dutch Church in North America.* 1 vol. New York: LEAVITT, LORD & Co.—Though wanting in the interest and personal adventure which render *Gutzlaff's* volume so attractive, this record of scenes passed somewhat amid the same peoples, and with the same pious motives is not without its merits. Much of it is given from the personal observation of the writer: other portions are compiled from authentic works and accurate information.

We had marked several extracts, but we find our limits will not admit them. The (to us) new and curious fact is stated, in speaking of the different creeds of China, that the *Buddhists*, whose doctrines came from India, made themselves the prevailing *sect by the circulation of tracts.* It is thus that both Truth and Error adopt the same means of propagation.

THE WORDS OF A BELIEVER: by the *Abbé de la Mennais.* Translated by the Rev. Dr. HAWKS. New York: CHARLES DE BEHR.—We have had a glimpse in advance, of this publication, about to appear, and give our readers a foretaste of it, which will satisfy them, that if eloquent in the original, it is not the less so in the translation.

The Abbé *de la Mennais* is a Catholic clergyman, politically a devoted adherent of the Bourbons at the restoration, but now an *anti-Philippiste*, and not far from a Republican. The following is one of his visions:

HEARKEN! Tell me whence cometh this confused, indistinct, and strange noise, which is heard on every side?

Place thy hand upon the earth, and tell me why she trembleth.

A mysterious something is abroad in the world. It is a work of God.

Is not every one in expectation? Is there a heart which does not throb?

Son of man! go up to the high places; say; what seest thou?

I see in the horizon a dark cloud, fringed with a glare, like the reflection of a conflagration.

Son of man! what seest thou now?

I see the sea lifting up her waves;—I see the mountain tops tremble.

I see the rivers change their courses; I see the hills totter;—they fall, and entomb the valleys.

All trembles, all is in motion, all takes a new aspect.

Son of man! what seest thou now?

I see clouds of dust in the distance: they move to and fro; they strike—they mingle—they unite.—They pass over the cities:—they are passed:—nothing remains but the naked plain.

I see the people rise in tumult; I see kings grow pale beneath their diadems. War is among them, war even unto death.

I see one throne, I see two thrones broken in pieces, the people scatter the fragments over the earth.

I see a people fighting, as the archangel Michael fought with Satan. Their blows are terrible. But the people are naked, while their enemy is clad in thick armor.

Oh God! he falls, he is smitten to death. No:—he is only wounded. Mary, the Virgin Mother, wraps him in her mantle; she smiles on him, and withdraws him for a time from the battle.

I see another people struggle without ceasing; from time to time they gather new strength in the struggle. This people have the mark of Christ upon the heart.

I see a third people, upon whom six kings have placed their feet: and at each movement of this people, six daggers are buried in their throat.

I see upon a vast edifice, high in the heavens, a cross scarcely distinguishable, for it is shrouded with a black veil.

Son of man! what seest thou now?

I see the East in trouble. He beholds his ancient palaces crumbling into ruins, his venerable temples falling into dust, and he raises his eyes as it were in search of other grandeur and another God.

I see, towards the West, a woman with a lofty look and serene countenance; she traces with a firm hand a light furrow, and wherever her ploughshare passes, I see generations of men arise, who invoke her in their prayers, and bless her in their hymns.*

I see, in the North, men who have no vital warmth remaining, save in the head; it makes them giddy; but Christ touches them with the cross, and the heart begins again to beat.

I see, at the South, a race of men oppressed with some unknown curse; a heavy yoke bows them down, they walk stooping, but Christ touches them with his cross and they stand upright.

Son of man! what seest thou now?

He answers not; let us cry again.

Son of man! what seest thou?

I see Satan fleeing, and Christ, surrounded by his angels, coming to reign.

THE HUNCHBACK OF NOTRE DAME; by VICTOR HUGO. Translated by FREDERIC SHOBERL. 2 vols. CAREY LEA & BLANCHARD.—No one can deny genius or originality to this historical romance; and yet we think it will not generally please. It is too antiquarian for ordinary taste. The intimate acquaintance with, and elaborate descriptions of, architectural details for instance, in regard to the old Church of *Notre Dame*, occupy a space that will seem very barren to the great mass of American readers. But then what a bright and beautiful and singular creation is *la Esmeralda* the gypsey girl; and how unlike common character, yet true to nature, is the Archdeacon *Claude Frollo*; and what a monster, almost Shakespearean, is *Quasimodo* the bell-ringer; and withal how vividly are the feelings, uages, and reality of the times of Louis XI. presented to the eye? It is decidedly a work of genius.

THE RETICULE, OR MINIATURE LEXICON of the English Language; by Lyman Cobb. Harpers.—A dictionary for occasional reference is the only work in which a small type is to be tolerated. It is not a book to pave over, and therefore the eyes can be but little affected by its use, and the smaller and more portable it is in size the more oconvenient is its use for those who have frequent occasion for it. The publication before us, though it contains upwards of eight hundred pages, can be put in one's waistcoat pocket, or stowed away in the corner of a lady's workbox, like Gulliver in the reticule of Glumdalclitch. It is stereotyped in the neatest manner; and contains a collection of verbal distinctions, with occasional illustrations, by Mr. Cobb, which alone would be worth the price demanded for the whole compilation.

†

HISTORY OF THE RISE AND PROGRESS OF THE ARTS OF DESIGN IN THE UNITED STATES: by WM. DUNLAP, Vice President of the National Academy, author of the History of the American Theatre, &c. &c. 2 vols., 8vo.—The reputation of Mr. Dunlap as an artist, and his popularity as the author of one of the most entertaining works that ever came from the American press—(the intermingling of narrative and fact, the biographical sketches, criticism, literary and dramatic anecdote, and amusing *gossip* of all kinds, give this character to the History of the American Theatre)—fit him above all men living for the task he has here undertaken. In fact, the intercourse alone of the venerable author and artist with several generations of his professional brethren, at once indicates him as the man to execute a work of the peculiarly characteristic nature of that before us.

The pressure of matter of more general interest perhaps than the Review, prevents us from entering into a fair examination of these volumes to-day, but we shall recur to them more than once hereafter. In the meantime we may observe, that the book being of a permanent character, and one that every American gentleman should have in his library, is handsomely printed with large type on royal octavo pages, so as to make in appearance, as well as actual interest, just the kind of work that one likes to open at any time for passing entertainment, or to refer to occasionally, as authority upon valuable facts connected with the progress of the arts of design in modern times.

THE KNICKERBOCKER, Vol. 4, No. 6.

THE AMERICAN MONTHLY MAGAZINE, Vol. IV. No. 3.

We are happy to see these rival Magazines, which were originally started nearly at the same time, still keeping their way—in spite of all prognostics that one of them must go down—and competing honorably for the favor of the public, which we trust is large enough to embrace them both. There should certainly, in a community so great as this, be patronage enough for two such periodicals; and competition in this species of literature is as effectual a spur to improvement as it is in every thing else. The number of the Knickerbocker at present before us, exhibits a great deal of activity and taste on the part of the Editors in getting up a pleasing melange for their readers; but the American Monthly, without presenting such a readable variety, contains one or two articles of a higher character than any in the Knickerbocker. "The Fall of Antony," for instance, the last paper in the latter, is by a master hand. The editors of the Knickerbocker, however, who have received so much praise from the daily press for their rapid improvement of that periodical, seem determined to merit it, so far as securing the contributions of the most popular writers can enhance the value of their Magazine. Among those who have contributed to the present number, we observe the names of Miss Leslie and Mrs. Embury, the old favorite Percival and the veteran Flint. The pressure of foreign news will not leave us room to quote, though we had already marked several passages for extract from the American Monthly, which was first received: among these, "Sight seeing in Europe" is an article which contains some practical suggestions, that might be framed and hung up in the cabins of our foreign packets for the edification of the numbers that weekly throng them, bent upon making "the grand tour." We shall find room hereafter for the animated and classic sketch of THE FALL OF ANTONY.

†

[COMMUNICATED.]

The Committee appointed by the *Lyceum of Natural History* to obtain subscriptions to its stock have already disposed of eighty-three shares, and hope to dispose of more. If gentlemen who are inclined to promote the cause of science and increase the reputation of the city, will attentively peruse the advertisement of the Lyceum, they will, it is confidently believed and hoped, cheerfully unite in forwarding the objects of this excellent institution. It is really a disgrace to New York, that the Lyceum has no local habitation of its own. Philadelphia has her academy of Natural Sciences, the object of which is precisely similar, and for which a large and ornamental building has been erected entirely by private subscription. Cannot this city do as much? It is hoped that if the members and friends of the Lyceum will exert themselves, the public spirit of the citizens will enable them to erect a suitable building, in which public lectures may be delivered, and their valuable collection be duly arranged, and that they may recommence the publication of their annals, which they have been obliged to suspend for want of funds—a circumstance the more to be regretted, since they have on hand and are constantly receiving communications containing much useful and interesting intelligence.

* An allusion to the United States.

Our Affairs with France.—A correspondent asks with seeming anxiety, whether he is to understand the American as "enlisted for the war," and as approving the request of the President, that the discretion of making reprisals, in certain contingencies, be vested by Congress in him. We answer to both questions unhesitatingly, no. We are against war if it can be avoided with honor—and we are against confiding *any* discretionary power whatever to the President.

Our position on this question is this: We hold that *right* is on our side throughout—that we have been trifled with by France—that it was the duty of the President to express strongly, as the Message does, the sense entertained by the country, of the backwardness of France in fulfilling the treaty—and to indicate a decided purpose not to permit the matter to linger any longer in doubt.

As to the suggestion of *reprisals*, we think, and so pronounced it in our first remarks on the message, *untimely*. Further consideration induces us to consider it as *inexpedient* moreover, as a remedy, even in case of further delay; countervailing duties, commercial restrictions or eventual non-intercourse, may one or all be demed quite as operative on France, and less injurious to this country, than reprisals which could not fail to be mutual.

[*From the Courrier des Etats Unis of Saturday.*]

It is our custom to accompany with some remarks the long translation of the Annual Message of the President. Hitherto this has been to us an agreeable and easy duty, for these addresses always presented a true and brilliant picture of the prosperity of a nation which we delight to look upon as a second country. Now, however, this is a disagreeable task; and we would gladly be permitted to be silent on the delicate question raised by that part of the Message which relates to France: but under circumstances where the interests of our fellow-countrymen are put in jeopardy, when uneasiness prevails in all the French counting houses, when every one is preparing either to stop or check his importations, to countermand his orders at the South, and to withdraw credits established, we may not give way before the difficulties of the undertaking, or fear to utter some words of opposition to declarations which seem to obtain among Americans the assent of all parties.

We say, that the acts of the Executive seem to meet with general approval; in fact all the opposition papers are vying in praises with those which habitually defend all acts of the Government. Already France and the Cabinet of the Tuileries are objects of attack: but to those who have followed attentively the course of the two parties in this country, to those who do not judge altogether by appearances, it is obvious that reasons of policy as connected with affairs at home, rather than motives of general interest, or of conviction, will account for the language of menace on the one side, and of full approval on the other. The words national honor,—very inappropriately as it seems to us,—have been pronounced; and after that, each party has sought to avoid the possibility of being found in opposition to it.

Yet it may well be asked, how the national honor can be compromitted on a question of money—of indemnity—when the Government, acknowledging itself the debtor, evinces frankly and fully its disposition to pay. Certainly we are little in the habit of defending the acts of Louis Philip's Government, but in this unpleasant affair, there are two points which cannot be denied, without the most complete ignorance of the facts and position of the whole matter: and these are, first, that the Cabinet of the Tuileries has always entertained the most positive purpose and the liveliest desire of terminating this difference to the satisfaction of the United States: and second, that the Chamber of Deputies only refused the appropriations because they considered the amount exaggerated. We repeat, that it implies entire ignorance of the general affairs of France, of the efforts of those who govern, to get out of all difficulties as fast as they can, and of their prodigality of the public monies, to impute to them in this matter, an unfavorable disposition, which cannot be in any way accounted for. We admit, that inconceivable indiscretions have been committed on both sides in the drawing up of this treaty, and in the exchange of ratifications—that the French Cabinet is chargeable with the greatest want of thought and foresight, in delivering to the American Minister an Act of indemnity which had no value, since it belongs to the Chambers alone to dispose of the public funds. But is the French constitution so little known at Washington, that it should not be understood there, that another sanction besides that of Louis Philippe was necessary to the validity of a treaty? Between States, as between individuals, in all transactions whether commercial or diplomatic, is it not the first step to ascertain whether he who proposes to sign, is authorized to sign? Suppose the President of the United States, of his own will and without authority, should assume to surrender Louisiana to France by treaty, and that a French Commissioner should present himself at New Orleans to take possession of that State, would the Governor think himself obliged to withdraw, or would the American nation look upon such a treaty as valid, because it had been made by the Executive? Or, without going further, what if the American Congress had not ratified the treaty signed at Paris, would it have been valid in the eyes of the American people? If this ratification *was* essential, can it be contended that that of the Chambers *was not*? Moreover, the correspondence of the American minister in Paris related too much in detail the apprehensions of Gen. *Sebastiani* about the disposition of the Chambers to adhere to the treaty, to render the supposition possible that the Cabinet at Washington seriously believed in the validity of the treaty without that indispensable formality. Unfortunately, too, some of these letters imprudently published, evinced too plainly the joy of unlooked for success, and which had been little anticipated. Right or wrong, the Chamber of Deputies, while admitting the justice of some indemnity, deemed 25 millions too much. They must have been very thoroughly persuaded of this; and the reasonings of M. *Bignon*, which produced the negative vote, must have been very conclusive, to have induced the Chamber so far to depart from its habit as to refuse any thing to the Ministry. If they were in error, pains should have been taken to enlighten them, for assuredly neither they nor the Government lacked good will. Had this been done?

Without any doubt the indemnity would finally have been voted—nothing was wanting but an opportune moment for pressing it, and that would have occurred. But now we venture not to predict the effect which the hostile declarations of the President will produce on the representatives of the French nation nor on the government. The appearance of menace to those who suppose themselves acting strictly within the line of right, is of too trying a nature for the language used at Washington to be without a disastrous influence upon the future course of this affair. A week ago and we should have said, without any fear of being mistaken, the indemnity will be paid; but the Message puts all again in question, it places the French government in a false position, paralyzes its good intentions, exposes it to serious embarrassment, or to the charge so often heretofore made against it of feebleness, it irritates the Chamber which only desired to be enlightened, and which, on its part too, may deem the honor of the nation touched by language usually reserved for the last extremity.

We can easily comprehend, that the President should ask of Congress power to act as his Cabinet might advise, in case the treaty should not be ratified at the approaching session of the Chambers; but the specification of *reprisals*, the threat of seizing French property, presents language so extraordinary in such circumstances, as to be, we hesitate not to say, a cause of astonishment to everybody, as it undoubtedly is of great uneasiness, to all the French commercial establishments in this country. It is not to be supposed that France will permit the property of her citizens to be seized with impunity, or that clouds of privateers, issuing not only from all the ports of France, but from those of all the world, would not instantly inflict severe reprisals upon the numberless American vessels which cover the seas of Europe. This, then is war—war, with all its evils and expenses, and between the two countries most interested in solid and durable friendship. The bare idea appears to be so much at variance with good sense, that we look to such a result as impossible. States only resort to such extremities, from motives far otherwise serious. It would not be among the least singularities of the times in which we live, to see the two most united nations on the globe making war upon each other and spending each a hundred millions, for a moderate claim, which it is desired to dispose of justly; while for four years past, Europe in arms, agitated by revolutions, and with interests conflicting with each other at every point, has not decided on such a resort. It would be a fine affair, for the other power.

Congress.—Nothing of much importance was done in the Senate on Monday. Mr. Webster gave notice of his intention to introduce a Bill compensating American citizens for French Spoliations prior to 1800.

Mr. Southard moved that on Wednesday next the Senate would proceed to the appointment of the Standing Committees.

Mr. Poindexter suggested the postponement of the day till Monday next, as the Senate was not very full, and as it was desirable to have a full attendance of the members.

Mr. Southard had no objection, with a view to consider the subject, that the motion be laid on the table, and moved to that effect; which was agreed to.

The Senate then adjourned.

House of Representatives.

The following Standing Committees were appointed by the Speaker, pursuant to the order of the House:—

Elections.—Messrs. Claiborne, Griffin, Hawkins, Vanderpoel, Hannegan, Hard, Burns, Bouldin, Kilgore.

Ways and Means.—Messrs. Polk, Wilde, Cambreleng, McKim, Binney, Loyall, McKinley, Hubbard, Corwin.

Claims.—Messrs. Whittlesey of Ohio, Barbour, McIntire, Gholson, Forester, Stoddert, Banks, Fulton, Miner.

Commerce.—Messrs. Sutherland, Harper of New Hampshire, Pinckney, Heath, Pearce of Rhode Island, Gillet, Phillips, Johnson of Louisiana, Morgan.

Public Lands.—Messrs. Clay, Boon, Slade, Ashley, Inge, Williams, Lincoln, Casey, Clayton.

Post Office and Post Roads.—Messrs. Connor, Kavanagh, Thomas of Louisiana, Briggs, Murphy, Lane, Laporte, Hall of Maine, Schley.

District of Columbia.—Messrs. Chinn, W. B. Shepard, McKennan, Allen of Virginia, Hiester, Fillmore, King, Vanderpoel, Steele.

Judiciary.—Messrs. Foster, Gordon, Beardsley, Thomas of Maryland, Hardin, Parks, Pierce of New Hampshire, Robertson, Hamer.

Revolutionary Claims.—Messrs. Muhlenberg, Crane, Bates, Standifer, Marshal, Young, Bayles, Turrill, Kinnard.

Public Expenditures.—Messrs. Davenport, Lyon, Page, Clarke of Pennsylvania, Tweedy, McLene, Jackson of Massachusetts, Hazeltine, Ferris.

Private Land Claims.—Messrs. Johnson of Tennessee, Mardis, Carr, Galbraith, Mann of New York, Bull, Chambers, Davis of Kentucky, May.

Manufactures.—Messrs. Adams of Massachusetts, Denny, Dickerson of New Jersey, Martindale, McComas, Osgood, Clowney, Cramer, Jackson of Connecticut.

Agriculture.—Messrs. Bockee, Taylor of Virginia, Hathaway, Barnitz, Bean, Dunlap, Clowney, Turner, Beaty.

Indian Affairs.—Messrs. Gilmer, McCarty, Everett of Vermont, Graham, Allen of Ohio, Dickinson, of Tennessee, Howell, Love of Kentucky, Grennell.

Military Affairs.—Messrs. Johnson of Kentucky, Vance, Speight, Ward, Thompson, Coffee, Bunch, McKay, Anthony.

Naval Affairs.—Messrs. White of New York, Milligan, Watmough, Lansing, Reed, Grayson, Parker, Smith, Wise.

Foreign Affairs.—Messrs. Wayne, Everett of Massachusetts, Hall of North Carolina, Coulter. Jarvis, Pierson, Patton, Letcher, Peyton.

Territories.—Messrs. Allan of Kentucky, Potts, Johnsen of New York, Wilson, Jones of Ohio, Ewing, Gamble, Cage, Trumbull.

Revolutionary Pensions.—Messrs. Wardwell, Barringer, Tompkins, Moore of Virginia, Lea of Tennessee, W. K. Fuller, Fowler, Bell, Lay.

Invalid Pensions.—Messrs. Miller, Beale, Adams of New York, Schenck, Chilton, Chaney, Mitchell of Ohio, Brown of New York, Janes.

Roads and Canals.—Messrs. Mercer, Blair, Vinton, Stewart, Rencher, Johnson of Maryland, Lucas, Pope, Reynolds.

Revised and Unfinished Business.—Messrs. Dickson, Harrison, McVean, Shinn, Taylor of New York.

Accounts.—Messrs. Mann of Pennsylvania, Lee of New Jersey, Mitchell of New York, Crockett, Osgood.

The following Standing Committees of the House,

appointed at the last session, remain through the Congress.

On Expenditures in Department of State.—Messrs. A. H. Shepperd, Day, Beaumont, Bodle, Patterson.

On Expenditures in Department of the Treasury. Messrs. Allen of Vermont, P. C. Fuller, Harper of Pa., Spangler, Clarke of N. Y.

On Expenditures in Department of War.—Messrs. Whittlesey of N. York, Deberry, Chambers, Webster, Halsey.

On Expenditures in Department of Navy.—Messrs. Hall of Maine, Huntington of N. Y., Ramsay, Sloane, Van Houten.

On Expenditures in Department of Post Office.—Messrs. Hawes, Fulton, Burns, Wagener, Lay.

On Expenditures on Public Buildings.—Messrs. Whallon, Darlington, Brown, Henderson, Hard.

The resolution of Mr. Wardwell for inquiry respecting the ship house and other matters pertaining thereto at Navy Point, Lake Ontario was adopted.

On motion of Mr. HUBBARD,

Resolved, That the Committee on Revolutionary Pensions be instructed to inquire into the expediency of providing by law for the publication *semi-annually*, in the newspapers printed in the respective States, which from their location may be best calculated to give information, and which shall be designated for that purpose by the Secretary of War, for the time being, *the names and the residence* of all those persons represented to be living in said States, who are on the rolls of the invalid and revolutionary pensioners and annuities, under the several acts of Congress.

The rest of the day was spent in discussing the resolution of Mr. Hawes, respecting the West Point Academy.

[FOR THE NEW YORK AMERICAN.]

Strong Beer.

The friends of Temperance in England are sending us back floods of temperance Documents. Some of them are deeply interesting, and calculated rapidly to disabuse the public mind with regard to the nutritive qualities of their national drink, *Beer*. A document before us proves, that so far from this liquor being a nutritious drink, a gallon of it does not contain more than a simple penny worth of nutriment. The only articles besides water, which are used in the composition of unadulterated beer, are Malt and Hops. The hop though possessed of medical qualities, is not considered nutritious any more than opium. The only nutritious article then used in making the ale or beer, is malt.—Malt is merely barley dried upon the malt kiln.—The nutriment then in ale, as Dr. Franklin has said, must be proportional to the solid parts of the barley which remain in it when it is drunk. If we can ascertain *how much barley* is used in the first instance for the manufacture of a gallon of ale, and then how much of its nutritious properties is lost in malting, brewing, and fermentation, we shall come to a certain result. Calculating barley at 3s. 4d. st'g per bushel, and supposing eight bushels of barley to make nine bushels of malt, it is calculated that every bushel of malt contains about 3-5th's worth of barley.

From this are brewed several sorts of ale, which run from 8 to 12 galls. to the bushel. The following statement from a practical Brewer in Preston, England, will show the quantity of barley in a gallon of ale.

Not more than 4 1-2d st'g of barley is used in a gallon sold for - - - 2s. 8d.
3 3.4d - - - 2s.
3d - - - 1s. 4d.

From this it results, that the average price of ale is about six times the price of barley: and the man who buys ale as a nutritious food, acts as wisely as he who, instead of giving 6d. a pound for his beef, gives 3s! Suppose we take the common ale, sold at 1s4d. a gallon—if only 3d. worth of barley is used in making it, who gets all the rest?

The following statement will show—

Cost of barley, - - - - -	3d.
Maltster, - - - - -	1
Government for duty, - - -	2 1-2
Brewer, (including cost of hops)	5
Retailer, - - - - -	4
	1s. 4d.

If, then, the *barley* was *really* in the ale, you would get three pennyworth for sixteen pence; but there is not more than *one-third* of this. In order to produce more *spirit* the grain is subject to three operations, in which it either loses a great part of its nutritive qualities, or they are changed into others which are the reverse of nutritious. According to an eminent chemist, *one-fourth* of the nutriment is lost in making, another *fourth* in brewing, and *one-sixth* by fermentation: so that, instead of threepence worth of nutriment in a gallon of beer, you in fact have only a pennyworth!!!!

SUMMARY.

The experiment of free labor by the emancipated slaves of the West Indies, proceeds, as was to be anticipated at first, with much difficulty. We have confidence, however, that ultimately it will succeed.

The latest accounts from Jamaica, of the 4th November, mention that the negroes (apprentices) manifest a determination to resist labor. Three attempts have been made to fire the town of Savannah-le-Mar. On one plantation, upwards of 400 apprentices are employed, who used to make 30 hogsheads of sugar, weekly; now they make only one. The state of things in Demarara is much worse. Thirty-six out of thousands of apprentices in open insurrection in that island, have been arrested as ringleaders. One is to be executed, one transported for life, three for fourteen years, and the remainder to receive severe floggings. In St. Lucia, things are very little better.

FROM MOCHA.—The Baltimore American informs us that Captain Sloan, of the brig Ann, at this port on Saturday from Mocha, reported that all the ports on the Arabian side of the Red Sea were blockaded by the Egyptian Squadron, and that an expedition was about setting out from Juddah for the purpose of conquering the country of Yemen. In consequence of this state of affairs, all business was at a stand."

The Pittsburg Advocate of Dec. 3d, says that, within the last twenty four hours the Ohio river had risen three feet, and continued to rise. The Canal is in excellent condition, and boats are receiving and discharging freight in large quantities at the wharves and warehouses. The weather, though gloomy and wet, is warm and calm.

A letter from Augusta of the 29th ult., states that as fast as Cotton came in, it was taken from the wagons at 17 1-4 to 18 cents, without regard to quality!

The ship Edward, from Calcutta, arrived at Cape Island on the 24th instant, brought in passengers, Mrs. Reed, servant, and child. Mrs. R. is the widow of Rev. Mr. Reed, missionary to Calcutta, who died in August last, on his passage home. The infant of Mrs. R. is only two weeks old, and she is in delicate health. The E. has on board two elephants, a tiger, and several other wild animals.

A Nassau paper of the 12th ult. says that, the American ship Louisa, Gooday, from Liverpool for Havana, was wrecked on the Gingerbread Ground, on the 6th;—cargo saved, the brig Santiago, Ames, from St. Jago de Cuba, was wrecked the 22d, on the Hogsties—part of the cargo saved,—the schr. America, Douglas, from New York to Mobile, after being ashore on Abacoa, on the 3d., had arrived at Nassau,—a ship was said to be ashore on Orange key.

Extract of a letter from a gentleman at Oswego, to his friend in this city, dated Nov. 20 1834.

"Last night was a tremendous night, and an unfortunate one here. The schooner Janet, Captain James King. ran foul of the east pier and bilged—total wreck; Captain and two hands drowned. She was loaded from the Genesee with 2700 bushels wheat; value of schooner five thousand dollars; insurance on wheat $1700; owned by Henry Fitzburgh, who was also part owner of the vessel. Captain King was one of the oldest and most careful captains on the lake."—[Daily Advertiser.]

Melancholy Saipwreck.—Portland, Dec. 3.—Capt. More, of the brig William Harris, arrived here this morning, furnishes us with the following intelligence:

Brig *Hunter*, E. Howes, of Boston, from New York, for New Orleans, was cast ashore near Jaruco, north side of Cuba, six leagues to windward of Havana, on the morning of the 4th November, at 4 o'clock, and is totally lost. Captain, mate, four seamen, and twenty-three passengers lost with her. Two seamen and five passengers were saved. The persons saved were John Grose, James M'Gaulay, John Mahoney, John Cockler, and Henry James—all passengers. Jere. Cotton and Richard French, seamen.—[Daily Adv.]

FATAL ACCIDENT.—A son of Mr. William Jones, 36 Clarkson street, six years old, was burnt to death on Saturday evening, in consequense of its loose clothing taking fire from a candle.

Accident.—Was drowned nearly opposite Fort Mifflin, on his way from the Sand Machine, at Thomson's Point, to Philadelphia, Mr. George Dixon, chief engineer.

Fire.—The interior of the Paper Hanging Manufactory and Bandbox Warehouse of Mr. Day, No. 3 Dover street, and the Engine House of No. 13, were destroyed by fire last evening.

When Bonaparte heard of some one or two instances of suicide occurring among his troops, in the year 1802, he issued forthwith a proclamation; which doubtless, had it not proved effectual, would have speedily been followed up by measures more effectual and prompt. We give the document below, not for any originality in the fine moral lesson which it inculcates—for the sentiments will be recognized as at least 2000 years old—but because it shows how this extraordinary man considered the propensity to suicide as not beyond the reach of control, and that it was his policy to meet it by a check direct—not by suppressing the notice of it through any fear of a dangerous example. The crime let it be remembered, is at least the attempt to commit a capital offence—a felony against God and the king, "who has an interest in the preservation of all his subjects;" and if punishment be not dealt out to the wretched culprit, for his own correction. the infliction of it is surely demanded for the warning and edification of others. "Order of the Day, St. Cloud, 22 Floreal, an X. The grenadier Groblin has committed suicide, from a disappointment in love. He was, in every other respect, a worthy man. This is the second event of the kind that has happened in this corps within a month. The First Counsul directs that it shall be notified in the order of the day of the guard, that a soldier ought to know how to overcome the grief and melancholly of his passions; that there is as much true courage in bearing mental affliction manfully, as in remaining unmoved under the fire of a battery. To abandon one's self to grief, without resisting, and to kill one's self in order to escape from it, is like abandoning the field of battle before being conquered.—Signed, Napoleon, Bessieres."—[London Medical Gazette.]

PRESERVATION OF MEAT.—Meat may be preserved fresh many months by keeping it immersed in molasses. A joint of meat, or any provision, suspended in a flannel bag, will keep sweet much longer than by most of the modes commonly practised. The cooler and dryer the meat is when the flannel is put round it the better, and the flannel should be perfectly clean. Fresh meat put in a close vessel containing vinegar, will be preserved a considerable time. Tainted meat will be rendered good by pickling it in pearl-ash water some time. Before it is cooked, however, it should be dipped in vinegar a short time, and then salted in brine.

CURE FOR THE STING OF A WASP.—A few days ago, happening to be in the country, we witnessed the efficacy of the remedy for the sting of a wasp, mentioned in one of our late papers. A little boy was stung severely, and was in great torture, until an onion was applied to the part affected, when the cure was instantaneous. This important and simple remedy cannot be too generally known, and we pledge ourselves to the fact before stated.—[Liverpool Mercury.]

Amount of Gold coined at the mint of the United States from Aug. 1st to Nov. 29th, $3,114,090.
Remaining uncoined, - - - $189, 610.

STATISTICS.—The U. S. Telegraph publishes in a tabular form a curious statement "of the estimated aggregate maximum amount of taxes, &c., of *Maine, R. Island, Connecticut, Ohio, Indiana* and *Missouri*," and from the returns furnished from these six States, gives an estimated average for the remaining States of the Union.

It is not said whence these returns are taken, but we infer that they were made in answer to the call of Mr. Livingston, when Secretary of State, for information on all these points, in connexion with the discussion carried on in Paris in regard to the comparative expenses of a monarchical and republican system.

We propose to state some of the results shown by these returns—which exhibit the number of inhabitants in each State, and the whole annual expenditure for state, town and county taxes, for militia, road and bridge taxes, pay of the clergy, school money, and support of paupers.

Of the six States above named, the population is 2,215,718; and the whole amount of taxes of all sorts, levied for all purposes above enumerated, is $3,438,515.

Estimating the population and taxes of the other States by these returns, we have as the aggregate for the whole twenty-four States, 12,866,020 inhabitants, and $22,719,098 taxes. Excluding the expenditure of the General Government, this would give as the expenditure per *head* of the whole population, for all state, county and town purposes, and for the support of clergymen and schools, $1 76.

Adding, then, the expenditure of the General Government, which, taking the average of 1830 and 1831, and excluding the amount applied to the liquidation of the public debt, is stated at $13,556,820; and dividing that sum by the population 12,866,020, we find that the expenditure *per head* for Federal purposes is $1 05.

Whence it follows that the annual expense of government, education, religion, roads, and paupers, to each man, woman and child in the U. States, is—

For State purposes - -	$1 76
For Federal purposes - -	1 05
Total - - - - -	$2 81

By the Montilla, there arrived yesterday from Carthagena $20,769, and by the Helen Mar, from Tampico, $134,659—total, $155,428.

Quick work—A merchant informed us yesterday afternoon, that he had received a letter from Leeds, by the Sheffield, in reply to a letter he wrote here on the 16th of October, and sent by the Columbus.—Thus the communication has been made in the short period of forty-eight days.—[Mercantile.]

ZOOLOGICAL INSTITUTE.—Among the sights of this sight-seeing city, we know no one more worthy of attention than that exhibited at the new and handsome establishment under the above name.

It is a new building in the Bowery, nearly opposite the Theatre, most conveniently arranged for the purpose in view, and handsomely fitted up. Safety, convenience and cleanliness are all abundantly provided for, and the collection of animals is as fine a one as we remember to have seen any where.—They are all in good health and condition, and withal have good appetites, (the carnivorous ones) as any body may satisfy himself of who will attend at 4 or 8 P. M., the feeding hours, to see them receive their rations. Visits at these hours give to the spectator a pretty good notion of the ferocity of the beasts.

There is a family of natives—a lioness with her three whelps, not more than four months old—that is particularly worthy of notice, for their kitten-like playfulness.

As to the bold man who plays as familiarly in their dens with lions, tigers, and leopards as any lady with her lap dog, he is an object of unceasing admiration.

[From the Baltimore American.]

The Eclipse.

We send you a few results of the observations made in St. Mary's College on the occasion of the Eclipse, which took place on the 30th ult. The more scientific deductions which may be drawn from that phenomenon, we will reserve for some future communication. We were agreeably disappointed to have so favorable an opportunity of witnessing the grand spectacle which nature exhibited. The weather was remarkably clear, and though some light clouds constantly passed over the disc of the sun at the beginning of the eclipse, they did not prevent the accuracy of the observation.

We give here the beginning and end of the Eclipse as seen by two different observers. The time had been previously ascertained with exactness by several altitudes of the sun and the stars by means of a good Sextant:

Observers.	Magnifying powers of the telescope.*	The time of the 1st contact or the beginn'g of the Eclipse.	The time of the 2d contact or the end of the Eclipse.	Duration of the Eclipse
		h. ms. sec.	h. ms. sec.	h. ms. sec.
1st	80	12 51 58	3 21 31	2 39 32
		8 meantime	2 meantime	4 meantime
2d	40	12 52. 8	3 31 21	2 39 12
		8 meantime	2 meantime	4 meantime

* The least magnifying power was used for the sake of greater clearness.

From this it will be seen that the duration of the eclipse was not the same for the two observers.—With the magnifying power 80, it lasted 20 seconds longer than with magnifying power 40. The reason of this is, that the first observer sees the beginning before and the end after the other: this is a necessary effect of irradiation, a phenomenon by which the apparent diameter of objects is a little increased.—Hence when the slope in the sun's disc is small, the disc appears perfectly round, and so much the more so as the magnifying power is less. The slope may be so small that it cannot be perceived even with the most powerful telescope. Mr. Bouvard, director of the observitory at Paris, proved this fact by viewing a round disc of white paper having several cuts with a powerful telescope: the disc appeared sensibly round. However, we would observe that this does not effect the accuracy of the observation, when the object is to ascertain the longitude of a place in which the eclipse has been observed; for one result makes the longitude too great, the other too small. The mean gives an accurate longitude; this supposes that the beginning and the end of the eclipse have been observed. We remarked with satisfaction that the time calculated in the American Almanac and the time observed are so little different that both the tables of the sun and moon, and the position of our city, are pretty well ascertained. This is the most striking instance of the sublimity of human genius, that notwithstanding the numerous inequalities of the moon's motion, the hour, minute, second, and fraction of a second can be assigned with the greatest precision when, in the immensity of space, two small discs come in contact.

As to the other phenomena connected with the eclipse, viz. the diminution of the heat and of the light of the sun, and the effect produced on the atmosphere, they stand as follows:

Meantime in Baltimore: Hour—P. M.	Thermometer towards the south. exposed to the sun.	Thermometer toward the north. in the shade.
1	64 F.	51.2 F.
1 30	60	52
1 45	58	51.7
2 15	54	50.7
2 45	54	49.5
3 30	58	51.0

A powerful burning glass at the beginning and towards the close of the eclipse could set cloth on fire in an imperceptible time; towards the greatest obscuration it took three, four and five seconds to set it on fire.

The darkness which attended the eclipse was considerable; the sky appeared as it usually does at the setting of the sun, and all objects looked singularly gloomy. The planet Venus became visible to the naked eye, and remained very bright for more than half an hour. We examined it with a large telescope; it appeared unusually distinct and beautiful, like a large moon with a very small crescent.

The meteorological state of the atmosphere seemed to have been effected by the eclipse. To this we attributed the light clouds, which passed over before the beginning of the eclipse and lasted during the first half of it. In fact the eclipse was travelling from west to east. The diminution of the heat produced the light clouds which were wafted over by the western wind. Towards the end of the eclipse, the equilibrium being restored, the clouds disappeared, the wind ceased and the atmosphere became as calm as it was in the morning. During the eclipse, the barometer seemed to have a tendency to rise, as will be seen by the following table:

	Ins.
Beginning,	30,097
Greatest obscuration,	30,103
End,	30,125

St. Mary's College, Dec. 1 1834.

Brevet Brig. Gen. Arbuckle has been appointed to the command (vacated by the death of Col. Leavenworth,) of all the troops on the South Western frontier.

Real Estate.—A large sale of real estate, belonging to the estate of the late Abraham Duryee, was made yesterday. The house and lot, No. 55 Wall street, brought the sum of $65,500. The house is not of much value, and will probably be pulled down. The lot is 36 feet 3 inches in front, and 41 feet 8 inches on the rear, depth 94 feet on one side, and 71 feet 9 inches on the other.

A City Indicted.—The Grand Jurors have presented the city of Boston to the Supreme Court for a nuisance in not repairing a street in South Boston. This is a novel case.

The steamboat fare between this city and Providence is raised to $8 during the remainder of the season. One boat, the Providence, is withdrawn from the line for repairs, and will not resume her place till spring. Of course there are one or two days in the week when no boat runs. The boats running on the line are the Boston, President, and Franklin.—[Journ. of Com.]

English Guns.—There is a peculiar malleability about our English iron that is not to be met with in any other quarter of the globe, and consequently the pinacle of perfection to which our gun-makers have arrived is unattainable by the foreign manufactures. A curious, and not uninteresting, exemplification came under my own observation about three years ago. A gentleman connected with a highly respectable firm in the gun trade, at Birmingham, was summoned to attend a board, or more properly speaking, a committee, composed of some of the Magi in Leadenhall-street, respecting a contract for guns, to be shipped to their possessions in the East. The president of this said committee was Captain M——, who was the spokesman of the conclave, and after some bartering and higgling as to the price, &c., the contract was agreed upon. As is customary on these occasions, several patterns of guns were produced before this board of tea dealers, and from divers samples handed to the would-be-contractor, one single-barreled gun was selected as the "ne plus ultra" of perfection. Mr. W. D——, the individual in question, was rather tauntingly asked by Captain M——if he could make such a barrel as the one which adorned the gun produced; a modest, yet firm, affirmation, was the reply. Now it so happened that this was a noted tool, the barrel whereof was of Damascus make. A bonus of ten pounds was promised if Mr. W. D——, the contracter, would produce a barrel of English manufacture, and of the same weight and calibre, and which would stand the test of trial, or proof, against it. The offer was boldly and eagerly accepted by the contracting party, and a day of trial appointed in the East India Company's ground. At the same hour, Mr. W. D——was there with a gun turned out by his employers at Birmingham, corresponding in weight and calibre to a fraction with the 'master piece." The usual proof charge of powder was apportioned to each of the rival powers, under the superintendence of an umpire at each trial of the strength of the barrel—one, two, three, four, five, six, seven, and eight bullets were fired by each of the guns without any damage but on nine bullets being discharged, the Damascus barrel flew into a thousand pieces, like so much glass; ten and eleven bullets were fired from the Birmingham gun, at the discharge of the twelfth bullet, about three inches of the muzzle blew off, and that without materially disfiguring the barrel, for the piece was severed as neatly as if it had been regularly sawed off, and it was the opinion of those present that the "Brummagem" would have stood even one or two more bullets, had the last (the twelfth) been properly rammed down.—Nevertheless and notwithstanding, as Joseph Hume says, the Superiority of British manufacture

was manifest, and without adducing this authenticated fact in support of my argument, I should be borne out in asserting that our iron is immeasurably better than any other in the world. The best material used for gun-barrels is stub iron or old horse-shoe nails, these form the best twist, are tougher, and more yielding withal.—[The Sportsman.]

THE ANGELS' WHISPER.

[*From Mr. Lover's Songs of the Superstitions of Ireland.*]

A BABY was sleeping,
Its mother was weeping,
For her husband was far on the wild raging sea;
And the tempest was swelling
Round the fisherman's dwelling,
And she cried, "Dermot, darling! oh, come back to me!"

Her beads while she numbered
The baby still slumber'd,
And smiled in her face as she bended her knee;
"Oh, bless'd be that warning,
My child, thy sleep adorning—
For I know that the angels are whispering with thee.

"And while they are keeping
Bright watch o'er thy sleeping,
Oh, pray to them softly, my baby, with me—
And say thou would'st rather
They'd watch o'er thy father,
For I know that the angels are whispering with thee."

The dawn of the morning
Saw Dermot returning,
And the wife wept with joy her babe's father to see;
And closely caressing
Her child with a blessing,
Said, "I knew that the angels were whispering with thee!"

*** One of the popular superstitions of the Irish is, that, when a smile plays over the face of a sleeping infant, angels are whispering with it.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.
J31 6t

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, }
January 29, 1833. }

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept.12-1y

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, pag 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ½ inch, 200 do. 1½ do. ½ do., 40 do. 1½ do. ⅝ do., 800 do. 2 do. ½ do., 800 do. 2½ do. ⅝ do. soon expected. *Flat Bars* in lengths of 14 to 16 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2¼, 2⅜, 2½, 3, 3⅛, 3½, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.]

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later al angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. Germant. and Norrist. Railroad,
m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.
J25 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy; to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS, SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 24 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 35 Wall street, N. Y, by

a12 tf D. K. MINOR & J. E. CHALLIS.

UTICA AND SCHENECTADY RAILROAD COMPANY.

Call for Second Instalment on Stock.

THE Stockholders in the Utica and Schenectady Railroad Company are requested to pay on or before the twentieth day of December next, the sum of Three Dollars on each Share of Stock in the Company held by them respectively under the penalty (provided by law in case of non-payment) of the forfeiture of all previous payments made thereon.

Stockholders residing in the city of New York, or within said State and south of the counties of Columbia, Greene and Delaware, are requested to make said payments to the Cashier of the Phenix Bank, at the said Bank in the city of New York; and all other Stockholders in said Company are requested to make said payments to the Treasurer of said Company at the Albany City Bank or at the Commercial Bank, in the city of Albany; but any Stockholder residing west of the counties of Albany, Schenectady or Saratoga may make such payments by depositing the same to the credit of the said Treasurer in the Ontario Branch Bank, in the city of Utica, or in the Herkimer County Bank, at Little Falls, or in the Montgomery County Bank, at Johnstown, provided a certificate of such deposite (with the name of the Stockholder by or for whom such deposite is made) be forwarded to said Treasurer, so as to be received by him on or before the 25th day of December next.

Albany, November 12, 1834. By order.

GIDEON HAWLEY,

Treasurer of the Utica and Schenectady Railroad Company.

nov17d&Ctdec20

LONG ISLAND RAILROAD COMPANY.

NOTICE IS HEREBY GIVEN, That the undersigned Commissioners, appointed by an act of the Legislature of the State of New-York, passed April 24, 1834, will receive subscriptions to the capital stock of the Long Island Railroad Company, being One Million Five Hundred Thousand Dollars, divided into shares of fifty dollars each, agreeably to the charter of said Company, on the 15th, 16th, and 17th days of December next, from nine in the morning to three in the afternoon of each day, at the following places, viz.—At the Dry Dock Bank, No. 333 Pearl-street, in the city of New York—at the Apprentices' Library in the city of Brooklyn, county of Kings—at the Court House, in and for the county of Queens—at the Inn of William Griffing, in the town of River Head, county of Suffolk—at the House of Thomas Hallock, in Smithtown, in said county of Suffolk.

Subscribers are required by the Charter of the Company to pay to the Commissioners at the time of subscribing five dollars on each share.

Copies of the Charter can be had upon application at the Dry Dock Bank, 333 Pearl-street, New-York.

Samuel Hicks	Benjamin Strong
John Lorimer Graham	Joseph Moser
Edwin Hicks	Edmund Frost
Singleton Mitchell	Nicholas Wyckoff
William P. Blydenburgh	James H. Weeks
Joseph H. Goldsmith	Valentine Hicks.

13nov tDec. 18

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.00—Semi-Weekly, at $4.00 in advance.

The American Railroad Journal, Weekly, at $3.00 per annum.

The Mechanics' Magazine, two volumes a year, at $3.00 per annum.

The Quarterly Journal of Agriculture and Mechanics, at $5.00 per annum, or $1.25 per number.

The Family Magazine, 416 pages a year, at $1 50 in advance.

The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at $1.00 in advance, now in the 5th volume, bound volumes $1.25

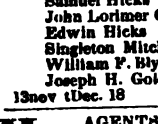
The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

s6v6 Ctf.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN.

347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications to wit:—NEW YORK FARMER and American Gardener's Magazine; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany*. tf

MECHANICS' MAGAZINE.

THE NOVEMBER NUMBER is now ready. It contains Judge Baldwin's Address before the American Institute, verbatim, corrected by himself; a supplemental account of articles exhibited at the Fare, and a great variety of interesting scientific intelligence, both American and European.

The Mechanics' Magazine and Register of Inventions and Improvements is published by the Proprietors, D. K. MINOR & J. E. CHALLIS, at No. 35 Wall-street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 31¼ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, *in advance*.—JOHN KNIGHT, (formerly proprietor of the London Mechanics' Magazine,) Editor.

The following encomiums on the MECHANICS' MAGAZINE AND REGISTER OF INVENTIONS AND IMPROVEMENTS, are selected, from many others, from newspapers published in every section of the Union:

No respectable mechanic who feels the least interest in the manifold improvements of the age, should be without this, or some similar publication.—*Susquehannah Register.*

It ought to find its way into the house of every artizan, and no mechanic who desires to keep pace with the various improvements of the day, will be without it.—*Geneva Whig.*

There is no periodical in this country which more deserves the patronage of the mechanic than this, and which will better repay him for the expense incurred and the time spent in its perusal.—*Elmyra Gazette.*

It contains information on almost every subject connected with mechanics, and a register of inventions and improvements.—*Montreal Gazette.*

This is a work of merit, and deserves the patronage of all practical mechanics; most, if not all of them, can afford it, the price being only three dollars a year.—*Virginia Republican.*

The selections appear to be judiciously made, and calculated to be very useful to that intersting portion of our fellow citizens for whose special benefit it is intended. While to the inquisitive reader, it will also be a source of much gratification to witness the progress of human invention and knowledge. This Magazine is worthy of every encouragement, and we wish the enterprising editor success. His work will prove a powerful auxiliary to the "American System," by improving American artists and mechanicians.

Protective laws to guard them from the influx of depressed labor, and a republication of the valuable improvements suited to their various professions, will greatly tend to give a spur to their industry, and keep them where they now are, and ought always to be, namely, among the most useful and respectable of their fellow-citizens.—*N. York Mercantile Advertiser.*

To say merely that it is valuable, would be no praise No mechanic—no family, should be without it.—*Westfield Eagle.*

Such a work has long been needed by our mechanics, whose inventive genius, almost unaided by science, has outstripped, if possible, inventive Germany, or the scarcely less ingenious England: a work in which the growing genius of our country may find food for its nourishment.—*Hartford Mercury.*

The third number of this periodical, published in New-York, by D. K. Minor, has been received. This may be considered a specimen number of a very useful and interesting work, and may be examined at this office,—*Exeter News Letter.*

We look upon this periodical as the best of its kind our country affords. To practical mechanics it particularly recommends itself, as embodying a great mass of information directly bearing on their employments and interests. The scientific man will find in its pages essays and remarks well adapted to his pursuits, and the general reader cannot fail to peruse its contents with increasing gratification, as affording him a continued supply of interesting and useful instruction. The best support of our institutions and government is knowledge diffused among the people, and every effort which tends to promote this end should have encouragement—the publication before us being calculated in an eminent degree to serve so high an object, possesses a just claim to our patronage.—*Salem Gazette.*

We bear testimony to the editor's ability to render the publication interesting and instructive. The Mechanics' Magazine is emphatically what its title imports; and, although intended more particularly for the American practical mechanic, will be found a valuable acquisition to the library of the man of science, as well as the general reader.—*Delaware Journal.*

We are assured by a scientific gentleman, that this work is conducted in an able manner; that its pages are replete with information; and that it should be generally read by those for whose benefit it is more particularly intended—the mechanics.—*Middlesex Gazette.*

Almost every practical mechanic may find in it much that will be serviceable to him in his business, or help to enrich his mind and enlarge his views.—*Lancaster Examiner.*

This Magazine evidently increases in value and interest as it advances in age. We trust it meets with corresponding support from the ingenious, scientific, and industrious artizans of our country.—*Nantucket Inquirer.*

We do not hesitate to pronounce the Magazine such a work as no mechanic or artizan should be without. It is under the editorial charge of John Knight, late publisher of the London Mechanics' Magazine. The July number, now before us, contains a variety of matter useful to the man of science as well as to the mechanic, (to which latter class the work is particularly recommended,) both from the interesting nature of the subjects to which it is devoted, and the clear and able manner in which they are treated.—*Petersburg Intelligencer.*

To the mechanic, especially, is this work of great interest and usefulness; and no one of this numerous and respectable class of community should fail to encourage publications calculated to improve them in practical and theoretical knowledge upon scientific principles. The spirit of inquiry, investigation, and experiment in the mechanic arts, which characterize the age, and promise so much benefit to our widely extended and prosperous country, cannot fail to derive much aid from so well conducted a publication as the Magazine.—*Watertown Herald.*

Our favorable opinion of this publication has been already so fully and so frequently expressed as to leave but little to add. It is a work which every scientific man, and every mechanic, ought to possess.—*Union, Salem, N. J.*

We are surprised that every mechanic in the land does not avail himself of this invaluable periodical. The subscription price is only *three dollars* per annum, for which sum two volumes, of about 400 pages each, can be obtained, containing more valuable information than can be otherwise obtained for triple the sum.—*Western Argus.*

We have received the November number of this valuable publication, and again call the attention of the operative classes to it. If our young mechanics, in particular, would lay out their spare money for works of this character, instead of the fulsome trash, denominated light literature, with which the press is so prolific, they would become possessed of a fund of useful and entertaining knowledge.—*Schenectady Cabinet.*

We have shown several of the numbers to some of our most eminent mechanics, and have their unqualified sanction in saying that they are worthy the perusal and study of every mechanic who wishes to rise in his profession They are got up in a very superior style.—*Montreal Herald.*

We are persuaded that the merits of the work are not sufficiently known; and yet there is no periodical in the country which has been more unequivocally commended by competent judges than this.—*Newark Advertiser.*

There is no publication in our country calculated better to serve the interests of practical men, than the work before us.—*Nantucket Inquirer.*

To gratify the thirst for knowledge evinced by the mechanics of the United States the publication was undertaken, and surely any effort calculated to advance a profession which has given birth to a Fulton, a Watt, a Whitney, a Franklin, an Arkwright, and other bright names, should meet with encouragement.—*Georgian.*

It is ably conducted, contains a large mass of the most useful and interesting matter, is neatly executed, and upon the whole is better calculated to diffuse useful and valuable information in relation to the various subjects of which it treats, than any publication with which we are acquainted, and this, too, so cheaply, that none can complain of the price.—*Washington Republican.*

A glance over its pages will convince any person of the great utility of such a work. Its contents are varied—almost every subject in the range of mechanism is touched upon—and its reduced price, three dollars per annum, places a system of modern architecture within the reach of nearly every person.—*Hillsborough Gazette.*

The work needs only to become known to insure it a very extensive circulation. It certainly cannot fail to be highly interesting and useful to the numerous class of persons for whom it is particularly designed.—*Paterson Intelligencer.*

It is atored with representations and descriptions of improvements in machinery, and of newly invented articles, together with information valuable to every class of citizens.—*U S. Gazette, Philadelphia.*

This periodical really deserves credit for the ability and attention with which it keeps pace with the mechanical improvements of the age. It is, we see, edited by Mr. Knight, late of the London Mechanics' Magazine, a work which did more to elevate the state of knowledge among the working classes, than any other in England.—*Commercial Advertiser.*

It is a work well worthy the attention of every mechanic, and one which affords to genius a chance of exhibiting talents.—*N Orleans Merc. Adv.*

This is a publication of practical value and deserved popularity.—*Albany Argus.*

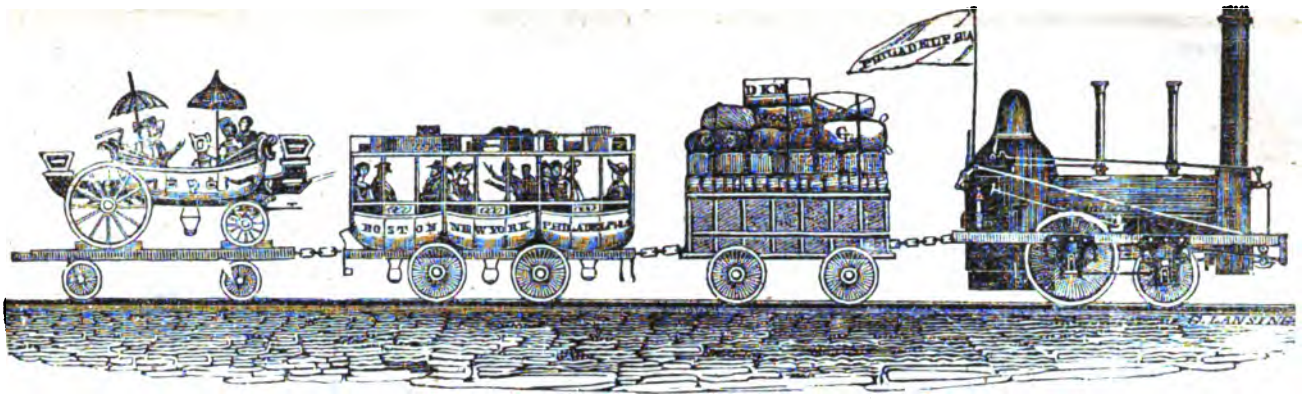
This is altogether one of the most valuable periodicals that ever appeared in the country; and there are few, if any, that would repay their perusal with equal advantage.—*Ashtabula Gazette.*

The theoretical and practical mechanic will find a mine of useful information in these pages.—*Mercantile & Advocate, N. Y.*

We do not know when we have perused a more useful and interesting work.—*Pennsylvania Intelligencer.*

Very few mechanics are so far advanced as not to be delighted and surprised with each successive number of THEIR magazine.—*Pulaski Banner*

Its contents continue to be selected with discrimination and judgment, and comprise a large body of exceedingly useful, and, in many cases, exceedingly agreeable information. For the class of persons for whose benefit it is principally designed it is uncommonly well adapted, and it is put within their reach, too, by the lowness of the price at which it is published.—*N. Y. Evening Post.*



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, DECEMBER 20, 1834. [VOLUME III.—No. 50.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, DECEMBER 20, 1834.

☞ TWO numbers more will complete the 3d volume of the Journal. *Shall it be continued through another year?*—Ed.

D. S., of 12th and 14th instant, received—that of a previous date referred to not received.

In this number will be found the report of W. Woodville, Esq., superintendent of transportation on the Baltimore and Ohio Railroad, which, with those before published, shows the condition of that important work, and gives a complete history of the construction and utility of railroads.

Erie Canal.—Amongst numerous other documents on hand, to which we shall give early attention, is the report of the Canal Commissioners, accompanied by that of the Engineer, H. Hutchinson, Esq., made during the last session of the legislature, relative to the construction of a new aqueduct at Rochester, and of doubling the locks east of Syracuse. This is an important document, and ought to be more generally disseminated, especially at this period, when efforts are making to effect a communication between the Lakes and the Hudson upon a more magnificent scale.

We shall also give, at an early period, the Report made by the Committee of Assembly of this State during its last Session, on the "petition of inhabitants of the county of Oswego," together with the letter of Benjamin Wright, Esq. annexed thereto. They have been only a few days in our possession, or they would have been published before.

Stephenson's Improved Locomotive, referred to in our last, an account of which, with engravings, is given in this number, will probably arrest the attention of those who are interested in railroads. Will American engineers favor us with their views of the improvement?

Important to Railroad and Bridge Builders.—We are indebted to Mr. Shepherd, a gentleman well known among men of science, especially for his extensive mineralogical researches, for the following very interesting communication. It will undoubtedly receive attention from the friends of railroads.

On preserving Wood from Decay, Dry Rot, &c.

Fredericksburg, Va., Nov. 10, 1834.

To the Editor of the Railroad Journal, &c.

Sir,—In answer to your inquiry, for "a cheap and an effectual method of preserving wood from decay, and destruction by worms, dry rot, &c." I have resumed a course of experiments on this subject, which I commenced in the summer of 1830; and trust that I shall soon be able to satisfy the public that the thing is both practicable and economical. I find my experiments confirmed, in my own mind, at least, by a careful examination of the petrifying earths and waters of Virginia. We have only to follow in the simple path of nature, and we see at once how the operation is performed. I will not at this time enter into the nature and cause of the dry rot, &c. Whether it is a little fungus, that lives and derives its nourishment from the tree within, as the mistletoe does from the tree without—or whether it is a chemical change, produced by absorption of moisture,—I leave for others to determine. It is sufficient to say that there is a principle of decay in most timber, which is more or less active whenever the wood is exposed to the atmosphere and moisture. There is also a saccharine principle, which is the food of worms; and there is also a process of fermentation which hastens its destruction.

This fermentation must be prevented—this saccharine principle must be destroyed—and the pores of the wood must imbibe some material which will effectually fortify it against moisture and the chemical action of different earths and atmospheres. The process by which I effect this is comparatively cheap and simple. I have obtained a patent for the same, and am now ready to receive proposals for furnishing timber of all descriptions for purposes where durability is especially required. If the timber does not answer the end proposed, or endure a certain number of years, according to contract, I will engage, and give security, to refund the amount expended in the experiment.

Some specimens of sapling pines, which I have carried through the process of preservation, and which have since been exposed, are now without the least appearance of decay, while the remainder of the same tree, alike exposed, is already in ruins.

Very respectfully, yours,

Forrest Shepherd.

Long Island Railroad.—We have received a small pamphlet, containing, with other information, the Reports of the Engineers on the Practicability of the Long Island Railroad. One of the Engineers, Wm. C. Young, observes that, "as there will occur on the grading no rock excavation, or bridges more important or costly than a class of sluice-ways, and as the grubbing and cleaning will be in a light growth of timber, and the excavations and embankments in gravel and sandy loam soil, I infer five thousand dollars per mile, on an average, will cover the expense of grading the road bed for a double track." The other engineer, Major Douglass, estimates all the expenses of every description, including those attending the roads from Jamaica to Brooklyn, and to Williamsburgh, at $1,557,000. He assumes *five hours* as a fair average trip from Brooklyn to Greenport, the eastern extremity of the road, and *six hours and a half* from the latter place to Boston.

"The distance," says Maj. Douglass, "from Greenport to New London is, say fifteen miles, and the passage may be effected therefore in an *hour and a half*, making *six hours and a half* from New-York to New-London.

"By constructing a wharf at Rocky Point, on the Sound shore, opposite Greenport, a termination may be given to the railroad on that side, only eight miles from the mouth of Connecticut river, (in Connecticut,) and by means of a ferry, a passenger will have it in his power to reach the wharf at Saybrook in *five hours and a half* or *six hours* from New-York.

"The trade and travelling which now reaches New-York from the various harbors of Peconic Bay, Shelter Island, Gardiner's Island, and the South Branch, will, in all probability, be diverted to the railroad, as soon as the latter shall be built. The number of vessels now engaged in this trade is from forty to forty-five, and the average number of passengers during the summer months about one hundred per day.

"The vicinity just mentioned is one of great and growing interest to the citizens of New-York, as a place of summer residence and sea bathing, and the same may be said also of a large proportion of both shores of Long Island. The increased facility furnished by the railroad for the enjoyment of this luxury is calculated, therefore, to subserve the health and comfort of the city, and to make the road itself a favorite and fashionable avenue. The trade and business of the *interior* of the Island, including many articles of market supply, which now

find an imperfect and uncertain conveyance by water, would reach the city more certainly, as well as more profitably, both to the buyer and the seller, by this conveyance.

"Lastly, the maritime position of Greenport, its convenience as a *harbor*, unobstructed, at all seasons of the year, and the facility with which it can be made by ships coming on the coast in certain states of the wind—these, and other considerations of a like kind, give it an interesting relation to the city of New-York, as an outport and harbor of safety; and should a railroad communication be established, so as to bring it, for the conveyance of passengers, mail bags, and light merchandise, within *five hours* of the city, it would doubtless contribute essentially, in many instances, to the certainty and despatch of commercial operations."

The subject of "A Society of Civil Engineers" has been frequently spoken of by engineers in our presence. It is a subject, in our opinion, well worthy of attention—one to which we should be happy to contribute the aid of our feeble efforts, and we therefore tender the columns of the Journal for the furtherance of the object.

Memphis, Nov. 11, 1834.

To the Editor of the Railroad Journal, &c.

Sir,—I read with pleasure in one of the late numbers of the Journal, the suggestion of a Society of Civil Engineers. I hope it will be followed up. The question at first occurs, how shall a society of that kind be started? Perhaps the most convenient plan would be the following. Let all the engineers, say from New-York, Philadelphia, Baltimore, and Washington, whose business will permit them to attend, meet at some central point, say Philadelphia, and form a trial constitution, to be published in the Railroad Journal. Let a corresponding committee be appointed at the same meeting, whose business it shall be receive communications and suggestions of improvement of the constitution, which communications shall be laid before a second meeting, and a constitution finally adopted. Terms of admission into the society will form a serious subject of inquiry. These are merely hints occurring to me at the moment. I should be glad to see some prominent engineers of the East "come out" on this subject. In the West we are too few in number to do any thing more than follow suite.

I sent a communication some time ago for the Railroad Journal, on the subject of Railroad Undulations.

The system has been too much extolled on one side, and unfairly ridiculed on the other. "In mediis tutissimus ibis" is an expression that will hold in this as well as in many other subjects of dispute.

An article on the singular subject of the capability of mathematical minds, by Mr. Cheverton, of England, appeared in the Railroad Journal. It is a pity the idea did not occur to Mr. C. that the very same things, with a little alteration, might be said of every other object of study, and class of men. The whole amount of what might be deduced from the above mentioned article is, that a man, who is *exclusively one thing*, is unfit for *any other thing*. This is a very wise maxim, very wise—and yet every body happens to know it.

A railroad from Louisville to Nashville is now in contemplation, and the subject agitated in those cities. From Nashville it will extend to Memphis. I trust the grand scheme will not fail of ultimate accomplishment. The travel along the Ohio and Mississippi waters is immense! This railroad, if finished, would take every passenger from the steamboats between Louisville and Memphis, the passage being made in about 30 hours.

Very respectfully, your obedient servant,

John Thomson.

Substitution of Locks for Inclined Planes and Stationary Steam Engines, on Railroads.

To the Editor of the Railroad Journal, &c.

Sir,—It is a desideratum with engineers and railroad companies, to discover a substitute on railways for inclined planes and stationary steam engines. This mode of ascending elevations is noticed and deprecated by Geo. W. Smith, Esq., editor of Wood's American edition on Railroads, in the following remarks.

"Stationary steam engines on inclined planes are an opprobium to the present advanced state of the science of civil engineering—they are exceedingly inconvenient, expensive, and dangerous. If the plane be steep, the locomotive engine cannot be advantageously drawn up with the waggons they have conducted to the foot of the plane; the great inconvenience of this system is too apparent to require comment. Hence, any available plan, which will *enable locomotive* engines to ascend inclined planes, with their *full complement* of waggons, will be a most valuable addition to the utility of railroads." He adds, "unless the height to be overcome be great, compared with the length of the whole line of railway, the delay resulting from the diminution of speed will be a trivial inconvenience, when the advantages of dispensing with an expensive stationary power are estimated."

We have not yet experienced the same fatal effects from inclined planes and stationary engines that they have in England, where many lives have been sacrificed by that mode of elevating. Some accidents have occurred in the United States, and they will probably multiply as inclined planes increase, until they produce the same appalling effects they have, and daily do, in Great Britain. There is no question but inclined planes, and stationary steam power, are not only the most expensive, but the most dangerous, parts of a railroad, and the individual who discovers a less dangerous and expensive substitute, though not as speedy, will deserve well of the community. It is rumored that a mode of ascending by locks is contemplated by some gentlemen in this city, and a patent has been, or is intended to be, obtained for the invention. I cannot discover any great difficulty of ascending acclivities by locks, at a much less *original* expense than excavating and furnishing them for inclined planes; but whether the danger and subsequent expense are diminished in the same proportion with the speed—(for locks must be a slower mode of elevating)—is not obvious. It is a subject of much interest to the community, and any probable method of surmounting elevations, than by inclined planes and stationary engines, merits attention and investigation. I feel some solicitude, Mr. Editor, to hear or see more of this lock project, and the inventor has my best wishes for the ultimate attainment, by locks or otherwise, of an elevating power, combining greater economy with less hazard, than the one now in use.

A Subscriber.

Annual Report of the Superintendent of Transportation of the Baltimore and Ohio Railroad Company.

Office of the Superintendent of Transportation, B. & O. R. R. Co., Oct. 1st, 1834.

Philip E. Thomas, President.

Sir: I have the honor to submit to you the returns of the operations on the Baltimore and Ohio Railroad, for the year terminating on the 1st October.

It will be seen on reference to these documents, marked C, No. 1 to 6, that the receipts have been,—for passengers, $89,181.79, and for tonnage, $115,254.79, making together, for the year, the sum of $205,436.58.

It will also be seen that, during the same period, the expenses of transportation and of the repairs of the railway and of the machinery, have been $132,862.41. Detailed statements of the items composing these several sums will be found on referring to the tabular statement marked No. 4.

On comparing the aggregates of the last year with those of the preceding, the following results will be deduced, viz.

	Receipts.	Expenses.	Net Revenue.
1833,	$195,679.72	$138,484.36	$57,195.36
1834,	205,436.58	132,862.41	72,574.17
Difference	$9,756.86	$5,621.95	$15,378.81

Being an increase in the receipt of last year over those of the preceding of $9,756.86, and a diminution in the expenses of $5,621.95. The net revenue of the year is $72,574.17, while that of 1833 was only $57,195.36; there has consequently been an increase of $15,378.81.

Attention will naturally be attracted to the small amount of net revenue remaining, after paying all the expenses connected with the working of the road. This subject it has heretofore been attempted to explain, but as it is a question of deep interest to the stockholders it may be proper to submit the matter in detail.

The gross receipts, it has been shown, are $205,436.58, whilst the net revenue is only $72,574.17. In comparing these returns with those of many other Railroads now in operation, the result will apparently be highly unfavorable to this work.

In making such comparison, however, it is important to advert to the different characters and functions of those Railroads relatively to this.

It will be recollected that, in their case, the tolls have, in every instance, been *much higher than those charged on the Baltimore and Ohio Railroad*. Those Railways have generally been constructed on the lines of great and well established thoroughfares, for the conveyance of passengers and goods, but more generally for the former. They are, with few exceptions, short, and as they are not, therefore, burdened with numerous agencies, their incidental expenses are consequently limited; and, having been completed to their proposed extent, their receipts would at once realize their original estimates, by the simple transfer to them of the trade already existing, but passing through less commodious channels.

In the case of this work its results are heretofore only imperfectly developed; it has advanced only a short distance towards its ultimate destination, and has scarcely yet participated in any portion of that commerce for which it was especially instituted. Its trade is derived, almost exclusively, from the business of the country, with which, in its present extent, it is locally connected—and although this has become very considerable, it is necessarily procured at numerous points on the line of the road, at most of which depots and agencies have been unavoidably been established. This liberal diffusion of facilities, at whatever places the public convenience has required them, has connected the Company over a great space of Railway within the city of Baltimore, and at several points on the line of the road, with heavy responsibilities, in relation to the receiving and delivery of goods; and has consequently rendered suitable agencies at such places indispensable; and when, also, the fact is adverted to, that, at each of these points, the same extent of responsibilities and minuteness of details are incurred by this Company, that are usually rendered by private forwarding houses, it will be readily conceded that the single branch of the service alluded to cannot be conducted without a competent, efficient, and, consequently, an expensive agency.

Under the circumstances in which this work is thus placed, of providing for and adapting itself to the general demands of the community, it may be confidently asserted that the numerous sources of expenses with which it is charged, cannot, whilst its efficiency and usefulness are maintained, be either curtailed in number or in amount; and, although this may be a disadvantage in relation to a limited busi-

ness, it is satisfactory to know that, in several very heavy items, these expenses would remain without any increase under a great accession to the business of the road.

As the subject of the expenses of this work is one of deep interest, not only to the stockholders, but as affecting also the efficiency and economy of the Railroad system itself, relatively to other modes of transportation, it may be proper, therefore, in the following exhibit, to submit clearly the data on which the assertion has been made, that a large portion of the expenses of the Company would remain without any increase under a very considerable augmentation of their receipts.

The general expenditures of the Company resolve themselves into two classess; the one not being affected either by a diminution of the commerce of the road, or by its increase to a considerable extent—and, consisting of the maintenance of the Railway, the support of depots, pay of agents, &c., may be called the *fixed expenses.* The other, being governed in its amount by the actual transportation, rising or falling relatively to the extent of such transportation, and embracing the cost of moving power and the repairs of vehicles, &c., may be considered as *floating expenses.*

Under the first denomination, that of fixed expenses may be classed:

1st. The maintenance and repairs of the Railroad, and the support of the police of the road. This portion of the expenditures being caused by the cost of removing slips, or opening ditches, drains, &c.—the adjustment of the rails, deranged by settling—by the removal of defective materials from the Railway—and arising, generally, from causes unconnected with the number of carriages which may pass over the road, and not being consequently affected by its amount of business—have been considered as fixed.

2d. The pay of officers, agents, and conductors. The individuals thus receiving pay from the Company, as before stated, cannot be reduced, being absolutely required at the depots that have been established: yet a much greater amount of business could be effected by them without any increase of their number—and it would not be hazarding an assertion, rashly, to state that if the business of the road, in its present extent, were augmented three-fold, these charges could remain without any increase; for the purposes of this exhibit, they may, therefore, be assumed as fixed.

3d. Depot expenses and contingencies, expenses of stations, &c.—These items are precisely similar in their character to the preceding—as although their number cannot be reduced, yet they are adequate in their present extent to the demands of a more extended commerce.

The aggregate outlay on these several accounts has been, viz.:

Repairs of Railways, &c.	$22,795.90
Pay of Superintendent, Agents, and Conductors,	13,453.20
Depot and Station expenses, contingencies, &c.	16,135.23
Total of fixed expenses,	$52,384.33

Under the second class of disbursements, that of floating expenses are embraced:

1st. The cost of moving power; that is, the feed, wear and tear, and general attendance on the horses and mules employed on the road, the pay of their drivers, &c.

2d. The use of locomotives, their fuel, and the pay of engineers and repairs of the engines, the repairs of waggons and carriages, and contingencies.

These items have amounted to, viz.:

Moving power, and wear and tear of horses,	$64,428.31
Use of locomotives, &c., and the repairs of cars, contingencies, &c,	16,049,77
Total of floating expenses,	$80,478.08

The general expenses are thus subdivided and classed as follows, viz.:

Fixed expenses,	$42,384.33
Floating expenses,	80,478.08
Total expenses,	$132,862.41

The results, therefore, which may be deduced from this analysis, are the following:

1. The actual receipts have been $205,436.58
The expenses have been, viz.:
Fixed, $52,384.33
Floating 80,478.08
132,862.41
The net revenue, $72,474.17

2. Had the receipts been doubled, the following result would have been obtained:
Actual receipts, $205,43.536 × 2 = $410,873.16
Expenses, viz.:
Fixed, $52,384.33
Floating, 80,478.08 × 2 = 160,956.16
213,340.49
Net revenue would be $197,532.67

3. Again,—the assertion has been made, that had the receipts been three fold as great as those collected on the road, yet, on the principal alluded to, the following results would have been presented, viz.:
Actual receipts, $205,436.58 × 3 = $616,309.74
Expenses, viz.:
Fixed, $52,384.33
Floating, 80,478.08 × 3 = 241,434.24
293,818.57
Net revenue will be $322,491.17

Or, to apportion these expenses between the passenger and tonnage business, as stated in Table C, No. 4, the following exhibit would appear, viz.:

Expenses.	*Passengers.*	*Tonnage.*	*Total.*
FIXED—viz.			
Repairs of Railroad, &c.	$11,397 95	$11,397 95	$22,795 90
Pay of Agents, Officers, and Superintendent	5,538 98	7,914 22	13,453 20
Depot expenses, contingencies, supervisors and stations on road	6,611 78	9,523 45	16,135 23
	$23,548 71	$38,885 62	
FLOATING—viz.			
Moving power, and wear and tear of live stock;	25,851 83	38,576 48	64,428 31
Repairs of waggons, Carriages, use of Engines, &c.	9,715 36	6,334 41	16,049 77
	$35,567 19	$44,910 89	$132,862 41

Thus, although with the present limited business of the Company, the net revenue has only been $72,574.17, yet if the road possessed a commerce of three times its actual extent, instead of its net revenue advancing only in a direct ratio,—or to $217,722.51,—it would, from the causes stated, be increased to $322,491.17.

The experience of the Company presents ample confirmation, in the monthly returns of the receipts, of the correctness of the data from which these hypothetical statements have been deducted,—and, in the analysis of the expenditures incurred in any two months of the past year, where the two extremes of revenue from tonnage presented themselves—viz. in July, when it was only $6,906.26,—and in September, when it amounted to $11,944.99,—the principle alluded to has been fully sustained.

In taking a prospective view of the operations of this Company, it may be assumed generally from the experience obtained that the net revenue will always advance in a greater ratio than the gross receipts, and that although that portion of the expenditure which, for distinction, has been denominated fixed expenses, will, in some of its items, after a certain accession of business, be slightly increased, yet such increase will form a very unimportant addition to the general amount,—or affect in a very trifling degree the principle it has been sought to elucidate.

The Western Trade.—This Company have now had the benefit of an experience, derived from active and uninterrupted operations for a period of nearly three years, on a line exceeding sixty miles in extent.

The transportation they have effected, during this time, has been of the most varied and general character, embracing commodities of the most cumbrous and ponderous descriptions known in commerce: among them may be daily remarked blocks of granite weighing several tons each,—logs of timber of from fifty to seventy feet in length,—machinery of the most unwieldy forms,—considerable numbers of live stock,—as well as every imaginable variety of produce and merchandize:—these may frequently be all seen on the railway, collected into a single train, and all moving with equal facility and despatch. The question of the adaptation, therefore, of the railroad system to the purposes of a general commerce, may certainly, by the daily proof thus afforded, be considered as settled.

On the portion of road now described there is a recurrence of all the impediments and disadvantages which would be found to exist on the extension of the work to the Ohio River. Its line, throughout these sixty miles, is excessively curved,—its grade is undulating,—and it has a succession of inclined planes to surmount; it, therefore, may be presumed to present, within this space, as many causes of expense and of delay as would be found to exist on a continuous line to that river; it may be questioned whether it does not exhibit more: for, although a railway accross the ridge of the Alleghany mountains would have a more extensive series of inclined planes, yet, as these would only occur in one instance on a road of nearly 300 miles in length, they would therefore have, relatively to their extent, a greater proportional length of level railway than exists in reference to the planes now worked at Parr's ridge.

It may, therefore, be assumed that statements, based on the facts just adduced, will be applicable to the prospective operations on a continuous railway to the Ohio River.

The line of road now in use, on which the transit is daily effected in both directions, extends to the Point of Rocks, a distance of sixty-nine and a half miles. Animal power having been heretofore alone used on this road for tonnage, the transit between Baltimore and that place is effected in twenty-four hours: that is to say, goods are received daily at the depots of the Company in Baltimore, from individuals, until twelve o'clock at noon, and are immediately loaded and conveyed to the Point of Rocks, where they arrive at the same hour of the following day.

The price for which this conveyance is effected is, westwardly, six cents; and, eastwardly, four cents per ton per mile, (of 2,240 lbs.)

Without at this time pausing to advert to the vastly superior speed that will be obtained on the substitution, in this branch of the business, of steam for horses, and without basing any calculations on its greater economy as a moving power, it would appear, from the data deduced from the daily operations of the Company, that, the distance between the nearest point of the Ohio river and Baltimore being estimated at 310 miles, the transit would be effected in a little over four days: that is to say, goods forwarded from Baltimore would be delivered early on the fifth day on the Ohio—and *vice versa.* And this service would be rendered, even at the highest rates permitted by law to this Company, and including all their charges, for the following prices, viz.: Westwardly, from Baltimore to the Ohio, for 84½ cts. per 100 lbs.; Eastwardly, from the Ohio to Baltimore, for 56⅓ cts. per 100 lbs.

It is an encouraging fact, and one of great

value to this work, that, low as these rates appear to be, they will, whenever it shall have reached a point which will afford more business to the road, admit of an extensive reduction. This consideration is the more important, as it will enable this Company to compete successfully with other modes of conveyance—or to reduce their prices, either to increase the traffic of the road, or to promote the western commerce of the city.

In order to ascertain how far this work may be enabled to realize all those important results, it may be proper to show the actual cost to the Company of transportation on the road, deduced from the experience and facts they possess from the operations of last year.

It will be perceived, by reference to table No. 2, applied to this report, that the tonnage transported in both directions has consisted of 56,120.17.3.3 tons, and has produced a revenue of $116,254.79; this tonnage having paid for its conveyance a medium rate of about 4¾ cents* per ton per mile, therefore the whole amount conveyed is equal to 2,491,174 tons for one mile, viz. 2,491,174 tons × 4¾ cts. = $116,254.79; or it is equal to 35,844.23 tons conveyed the whole distance between Baltimore and the Point of Rocks, viz. 35,844.23 tons × 69½ miles × 4¾ cts. = $116,254.79.

The cost of this conveyance has been shown by the preceding table to be divided into two heads of expenses: one, the floating expenses, consisting principally of moving power and repairs of machinery, and advancing or receding in the direct ratio of the tonnage transported—this particular item amounted on tonnage by that table to $44,910.89, or to 1¾ cents per ton per mile, viz.: 35,844.23 tons × 69½ miles × 1.8028 cents = $44,910.89.

The other division of the expenses of transportation, denominated, from their remaining stationary under considerable terms of increase of revenue, the *fixed expenses*, amounted to $28,835.62.

It has also been shown that if the business of the road were enhanced to a threefold amount,—and with slight modifications this limit might have been extended much farther—yet that these particular expenses would not be increased by such improvement: and that, consequently, if the present local tonnage of 35,344 tons were augmented threefold,—and it cannot but be considered as a very moderate estimate, when it is recollected that reference is had to the Ohio trade,—the fixed expenses would then be only .385837 cents per ton per mile,—viz.: 35,844.23 tons × 3 = 107,532.69 tons × 69½ miles × .385837 cents = $28,835.62.

This sum being the amount of those expenses last year. In other words, with a yearly transportation of 107,532 tons, the ratio of the entire expenses would be, viz.:

Floating expenses,† say	1.8	cents.
Fixed do. "	.386	
Total expenses of transportation	2.186	per ton per m.

Thus the whole expense incurred by this Company in the transportation of goods and produce between the City of Baltimore and the Ohio River, under all the tardiness and costs incident to *animal power*, would be less than 2½ cents per ton, viz.: 1 ton × 2.186 cts. × 310 miles = $6.78, or 30½ cts. per 100 lbs.

At the rates now charged, the transportation, eastwardly, from the Ohio, per 100 lbs. would be 56¾

Westwardly, the transportation would be per 100 lbs. 84½

141

2) 141

Average, ... 70½

The expenses being 30½

The Net Revenue would therefore be per 100 lbs. 40

As the great object of the institution of this work was to offer to the commerce of the West a rapid, uninterrupted, and cheap means of conveyance to the Baltimore market, and, as this traffic is already in possession of other improved avenues to the Atlantic, it is a matter of the highest importance to know the extent to which a reduction in the rates on this road could be made to meet either the exigencies of trade, or the competition of other lines of communication; and, in making such estimate, the fact will be kept in view, that in every instance where the tolls have been lowered on other works, instead of a diminution of income, they have invariably, by the great accession of business the measure has produced, had an augmentation in their Net Revenues; similar effects would result from the same proceeding in relation to this railroad, and, as under the circumstances just stated, 56¾ per cent. of the gross receipts on tonnage,—or 40 cents for each 100 lbs. conveyed,—is net income, such portion of this sum, therefore, could be surrendered as events might render expedient or necessary: for instance,—if a reduction were made of 25 per cent. on the toll and transportation, the charge would then be, viz.:

70½ cents less 25 per cent.	=	53 cents.
Expenses as stated above	=	30½ .
Net Revenue for each 100 lbs.		22½

That is to say, the average price of 53 cents for the two directions would resolve itself into the two rates of charge of—

Westwardly 53 cents per 100, from Baltimore to the Ohio, and Eastwardly 42 cents per 100, from the Ohio to Baltimore—or for each barrel of flour conveyed from the Ohio to Baltimore, the freight would be rather less than 92 cents.

That this Company with an ample business on their road could with great facility, and with positive advantage to themselves, as well as to the community, reduce their rates to this extent, or even more, can scarcely be doubted.

There is, however, another consideration which is entitled to great weight in this question, and which affords to railroads generally the means of meeting or resisting competition, from other modes of transportation, in a pre-eminent degree: it is the certain and unfailing resource they possess in the conveyance of passengers. This description of business is benefitted in its net profits, even more rapidly than tonnage, by an increase in its amount. This will be readily conceded when it is observed that a locomotive engine will carry upwards of two hundred persons at the same cost that is incurred to convey any less number; any measures, therefore, that may add to the commerce on the road, must also necessarily augment the number of persons travelling in connection with such commerce: and whatever sacrifice of their Revenue from tonnage the company might find it expedient to make, in order to promote or protect any of the great interests connected with this work, they would, from the enlarged business that must ensue from that measure, be more than indemnified in the increased receipts they would derive from passengers.

Application of Steam.—As a matter of the highest interest to the Company, during the last season, may be noticed the successful use and permanent introduction of steam on the Railway.

On the 13th July, Messrs. Davis & Gartner completed and placed upon the road a new engine, called the "Arabian." After a few days of defective performance, occasioned by unsuitable fuel and other embarrassments, arising principally from the newness of the machinery, this engine performed regularly, and with great accuracy, the daily round of duty of 80 miles, with the passenger train, to and from the planes to Baltimore.

Since that period, a second engine has been received from the same factory, which is also now undergoing a similar trial to that described in reference to the Arabian, and it is performing it with equal success.

The satisfactory manner in which those engines have worked, has realized the most sanguine expectations formed of their economy and efficiency; and although necessarily limited from prudential considerations to a moderate rate of travelling, by the curvatures of that portion of the road on which they ply, they evidently possess the power of exerting a very superior speed.

In the routine of operations in which these engines have been engaged, they have each performed the same service that it had previously required 49 horses to effect. This, however, is not to be considered as the extent of their efficiency; it is merely the limit to which the peculiar business on which they have been employed has required their power, as instances have occurred in which the services of a single engine have, during the day, represented the work of 113 horses.

The question of the economy of steam power has been so long conclusively settled that it would be superfluous, if it were practicable, to add any new remarks on this head: there is one particular, however, connected with a subject already alluded to in this report, in which its efficiency will have a most beneficial effect on this work, and by which will be added another proof to those already adduced of the disadvantages and high relative cost of transacting a small business on a Railroad.

The engines, it has been stated, have daily been employed in transporting the Frederick train 80 miles. This train has generally consisted of from 50 to 70 passengers; sometimes, but very rarely, 100; the result of this operation has been, viz.:

50 passengers, 80 miles, at 3 cts. per mile,	$120
Expenses of locomotive, 1 day, say,	20
Net amout,	$100

Each engine could, however, with equal facility, have conveyed 200 or 250 persons, and if the business of the road were sufficiently advanced to require its service to that extent, it would be effected at the same cost; the result would then be as follows, viz.:

200 passengers, 80 miles, at 3 cts. per m.	$480
Expense of locomotive, 1 day,	20
Net amount,	$460

Thus, with precisely the same outlay of expenses of every description, with the single exception of the wear and tear of the additional carriages that would be required, the net profit of a day's work of the engine, with a full business, would be $460; whilst, with the present limited business, it is only $100.

Repairs of the Railway and Maintenance of the Police of the Road.—The duty of superintending the condition of the Railroad, and of effecting the necessary repairs, having been incorporated with the department of Transportation, it is requisite that, in this report, a statement should be presented of the cost of that service.

It will be perceived that the aggregate expenditures incurred under this head have been 22,795.90, being 8.757.14 less than during the preceding year; these disbursements have been made for the following items, viz.:

Repair and adjustment of stone track, ...	$5,960.41
Do. do. do. wood do.,	5,436.67½
Removal of slips, cleaning ditches, drains, &c.	6,857.46
Repair of horse track, ...	2,081.33
Contingencies, ...	2,460.02½
Total for the year,	$22.795.90

* This rate is deduced from the average of the two amounts received for tonnage transported in the two directions—(see table C, No. 2,)—viz.: that eastwardly having paid four cents per ton per mile—and that westwardly six cents. The precise rate will be found to be, cents 4.6437.

† The unimportant decimals have been here excluded.

Reductions have from time to time been made in the number of supervisors employed in this department, until from seven they have been diminished to three; beyond this, it is believed, no reduction can be effected. Each of these agents has the supervision of upwards of 20 miles of road, and as they are charged, also, during the winter, with keeping the track free from snow, and in order for uninterrupted travel, it is important that this branch of the service be not too much weakened. It is due to these officers to acknowledge the alacrity and success with which this important duty has, in every instance, been discharged by them; and that, although this road has now been in operation for nearly three years, the transit has been effected throughout the entire line in both directions, without the interruption of a single day, during the whole of this period.

General Operations of the Year.—It has been shown that the receipts of this year have been advanced over those of the preceding to the amount of $9,756.86, while the general expenses have been diminished $5,621.95. This state of the business, although relatively favorable, presents, nevertheless, but an imperfect view of the improvement that has actually taken place in the general commerce of the road; or rather, in the extent of country and population to which it has become the means of intercommunication; for, in common with all public works, the Railroad, for several months of the past year, participated in the general depression of trade, and experienced a very great diminution of the tonnage and passengers of its previously existing lines of conveyance. The increase which has, therefore, actually taken place in its receipts, will establish the fact of the more extended range of its recent operations; and, as it has arisen from several new and important channels of business, which have successively become connected with the work, the company cannot fail during the next year to feel their influence on the revenue.

The railroad having received, for some time, through the lateral road to the city of Frederick, a full portion of the business that can at present flow from that quarter, it is a matter of deep interest that the main stem of this road should, as rapidly as possible, be connected intimately with the commerce of the Potomac and Shenandoah, as it is through these channels, aided by the public works now being made in connexion with them, that the future accessions of revenue will be received; and it may be stated, as a proof of the progress the business has recently made in this quarter, that, by comparing the receipts of flour at the Point of Rocks depot on the Potomac, for the six weeks immediately preceding the 1st of October of this year, with the same period of last, it will be found that, in this short space, there has been a gain in the present year of 9,204 barrels, viz:

Received at the Point of Rocks depot, from 20th August to 30th September, 1833, 1,417 barrels. From the 20th August to the 30th September, 1834, 10,621 barrels. Gain in 1834, 9,204 barrels.

Respectfully submitted,
W. Woodville,
Superintendent B. & O. R R.

Junction of the Rhine with the Danube.—The following particulars of a plan to unite the Rhine and the Danube, by means of a canal, are given in a private letter from Munich, dated October 8. The government of Bavaria is now anxiously occupied with the consideration of a plan for uniting the Rhine with the Danube, by means of a canal. This plan was thought of so long ago as the time of Charlemagne, but various circumstances prevented its execution. According to the law which received the sanction of the Bavarian Chambers, the canal will be completed by a company of shareholders, but the government is to have the power to take one quarter of the shares. The maximum of toll which the proprietors of the canal are authorized to exact, during ninety-nine years, is fixed at one-third of the price which would be charged by waggon for the same distance. The canal will have its source in the Danube, near Kellheim. Its course will follow the valley of the small river d'Altmiihl and the Sulz, as far as Neumark; from thence the canal will pass in the direction of Nuremberg, and pass the river Reignitz, by Furth and Bamberg. Its length will be 592.543 Bavarian feet, or 28¼ German miles. Its breadth will be 54 Bavarian feet, and its depth 34. The highest elevation of the canal will be 278 feet above the surface of the Danube, near Kellheim, and 630 feet above the surface of the Reignitz, near Bamberg. This elevation will be attained by means of ninety-four locks. It appears from an official calculation, that the conveyance of a quintal of goods throughout the whole length of the canal will not cost above a kreutzer and a half, including the expenses of navigation. Adding to this 12 kreutzers for the toll of a quintal of wood, and 24 kreutzers for any other description of goods, it would appear that goods may be conveyed the distance of 23½ geographical miles at the rate of 13½ kreutzers for the quintal of wood, and 25½ for the same weight of other descriptions of goods. Taking the average annual quantity of goods conveyed in the same direction, a saving of transport to the amount of 900,000 florins, (about a million of francs,) may be effected. Not only will this canal effect a saving in the price of transport, but it will also increase the number of outlets for manufactures in that direction, and will be of great benefit both to consumers and producers. The economy in the means of transport will lead to a reduction of the cost of the first materials, and the commerce of the whole of Europe will benefit by it. The expense of the construction of the canal is estimated at about 18,732,800 francs, and the expense of repairs at the annual sum of 175,921 francs. From various calculations, it is supposed the shareholders will derive from the canal a net profit of 600,000 florins, or about seven per cent. upon the capital of the first investment, it being supposed that, in the first year, at least 1,700,000 quintals of goods will have been conveyed along its whole extent.—[English Paper.]

The following patent for tanning leather may be of use to some and interesting to others of our subscribers. It is from the "Repertory of Patent Inventions" for August.

Specification of the Patent granted to John Paul Neumann, *of Cornhill, in the City of London, Merchant, for certain Improvements in making or producing Leather from Hides and other Skins.* Sealed December 21, 1833.

To all to whom these presents shall come, &c. &c. *Now know ye*, that in compliance with the said proviso, I, the said John Paul Neumann, do hereby declare that the nature of the said invention, and the manner in which the same is to be performed, are particularly described and ascertained in and by the following description thereof, (that is to say):

The novelty and utility of the new invention communicated to me by a certain foreigner, residing abroad, consists in employing the hop plant, whether root, stalks, or leaves, or any part thereof, either in a green or dry state; but I prefer the use of the plant in a dry state, and for the sake of economy, I give the preference to the stalks and the roots; but be it understood, although I prefer the hop plant, or any part thereof, to be used by itself for the purpose of tanning, yet they may be used in conjunction with any vegetable containing tanning matter. The mode to which I give the preference for this plant to be used for the purpose of tanning, is to grind or reduce it as fine as practicable, and, when so prepared, it may be employed for every mode of tanning in the same manner as oak bark, or any other vegetable containing tanning matter. According to circumstances of different hides or skins, this tanning matter may be applied either warm or cold, whether in extract or mixed with other matter; every practitioner in tanning will soon perceive which mode is most applicable for the different hides or skins which he means to subject to the process of tanning, as hides and skins require different modes of treatment; with some it is necessary to use heat or warmth, and others cold; but I prefer to have the hides or skins prepared in the usual mode hitherto followed by practical tanners.

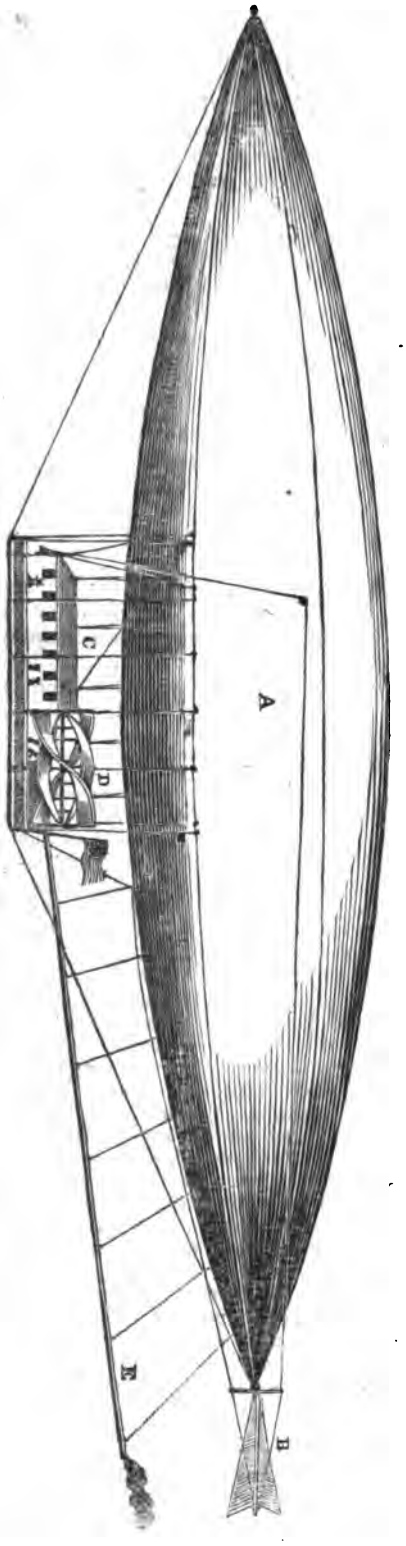
The principal novelty of this invention consists in using the hop plant for tanning, which hitherto has never been employed for that purpose; and by means of this process it will be rendered both useful and valuable for the purpose of tanning.—In witness whereof, &c.

Enrolled June 20, 1833.

Blasting Rocks.—As many lives are yearly lost by the untimely explosion of the powder used for blasting rocks, humanity prompts us to give a process as we heard it described a few days since, by a person who had been injured in a mine where many accidents of the kind had happened, which led them to try other methods of charging the rocks than those commonly practised, and which he said ended in the discovery of a safe and expeditious manner of blasting. As these accidents had uniformly happened in what he denominated the "tamping" or driving down the brick and other substances used in filling above the powder, they, for an experiment, substituted plaster of Paris, which had been heated, as for preparing cement, which they mixed with water in the same manner, and poured the cement into the hole upon the powder, having first introduced the quill or fuze; the cement immediately set or hardened, when the blast was ready for firing. He said that he never knew a blast managed in this way to fail of doing well, and never knew an accident happen; that it was quicker done, and was more economical in every respect. If this should prove correct, it should be generally introduced.—[Gen. Farmer.]

Coffee imported into the United States.—We learn by an official paragraph in the Globe, that the amount of coffee imported into the United States for the three first quarters of 1833, was 99,955,020 lbs., valued at 10,567,299 dollars; and that for the three first quarters of 1834, there were imported 60,344,701 lbs., valued at 6,473,469 dollars. During the corresponding period last year, there were exported 24,897,144 lbs. valued at $3,041,689—this year 32,715,599 lbs. valued at $3,969,906.

South American Cotton.—Some specimens of this cotton, from a tree twenty years old, and about fifteen feet high, have been forwarded to Washington, by R. B. M'Afee, at Bogota, with some of the seeds for distribution among the southern members of Congress. The tree bears two crops every year, one ripening in June and the second in December, each tree yielding from four to six pounds of cotton.



Explanation.—A, the body of the balloon; B, helm, or rudder; C, cabin; D, spiral fan-wheel; E, funnel, or smoke pipe.

Travelling Balloon, or Flying Machine.

To the Editor of the Mechanics' Magazine:

SIR,—Having lately proposed a plan for employing a balloon for an observatory, I shall now endeavor to describe more minutely the construction of a similar balloon, with apparatus for propelling and mode of managing the same under various circumstances, and show the comparative safety to which this mode of travelling may be reduced.

A balloon 500 feet long and 50 in diameter, gradually tapering from the centre to a point at each end, (which figure, for want of a better name is called a *pointed spheroid*,) is made of strong sheeting, and is rendered tight by oil or varnish; and its form is supported by eight wooden rods, an inch and half in diameter, which extend the whole length of the balloon, inside of the sheeting, and are fastened together at the ends, but separate so as to be equidistant from each other towards the centre, the sheeting being nailed to the rods at every foot of their length, by which they are effectually kept in place. These rods, it will be understood, continue in contact the whole length, until the balloon is inflated, when they become separated as above mentioned.

A stage fifty feet in length and twenty in breadth, constructed economically with regard to the weight of materials, is suspended by cords about twenty feet below the balloon; the cords, thirty or more in number, being attached to the stage at various points and convenient distances, are supported at the top by rings, which are attached by screws to the several rods or ribs of the balloon. The stage is further supported by four other cords, two of which extend from the two forward corners of the stage to the forward point of the balloon, and the other two from the two hind corners to the stern point. To this point is connected, by a universal joint, the end of a pole four inches in diameter, which extends backward horizontally twenty-five feet, tapering to the diameter of two inches. From the small end of this pole four arms project in opposite directions; and from the outward end of each arm, a cord extends to the forward end of the pole, being made fast to both. These arms are six feet long, ten inches wide, and one inch thick, being tennoned to the pole, and supported by a wire which compasses the four, and is fastened to the end of each. To the space between each cord and the pole, a piece of painted cloth is fitted, one edge of which is nailed to the pole, and the other is sewed to the cord: the wide end is also nailed to the arm. Other four arms, six feet in length, project in opposite directions, two vertically and two horizontally, from the forward end of the pole, near the universal joint. Two cords extend from the small end of the pole to the ends of the two horizontal arms last mentioned; thence forward to two pulleys, which are attached to the sides of the balloon, a little forward of the centre; thence down to a light steering wheel, on the forward part of the stage. Three other cords proceed from the same point: two of which pass over the head of the upper arms; thence over two pullies near the first; and the other cord passes to the end of the lower arm, thence over a pulley attached to the lower side of the balloon; and the three terminate on a small shaft, with a crank, ratchet and fall, near the steering wheel, that the steersman may be able to govern the vertical as well as horizontal variations in the direction of the balloon.

The stage is enclosed by a railing of cordage and net-work, and on the forward and central part is a cabin thirty feet long and ten wide, covered with painted cloth, and supported by the suspending cords. Two spars, thirty-five feet long, and secured in a horizontal position, twenty feet apart, parallel to each other, and about ten feet above the stage, one of them being over the hinder part of the stage, and the other over the end of the cabin. These spars are also supported principally by the suspending cords and braces, and each end of each spar supports the pivot of a revolving shaft, which is twenty feet long, and extends from one spar to the other. Neither the spars or shafts are more than four inches in diameter, but are thoroughly supported by braces of cordage extending from end to end of each, and passing over circular bearings near the centres. Near each end of each shaft are four arms seven feet long, and other four arms also project from the shaft at every two feet of its length, the several sets of arms not being parallel, but each set varying in direction twenty degrees; thus each row of arms has a spiral direction, extending half round the shaft, and supports a spiral fan of fine oiled cloth, four feet wide, and extending the length of the shaft. The spiral direction of the fans on the two shafts is opposite, being such that the outward motion of the upper fans will mutually tend to propel the machine forward by the re-action of the air. On one end of each shaft is a small spur wheel, or band wheel, by means of which motion is communicated to the spiral fans, from a steam engine of ten horse power, haying a boiler of a light portable kind, and situated on the after part of the stage. The engine and connecting machinery need not be particularly described. No other fuel than charcoal is used, and the combustion depends on a blast rather than draught; and the smoke is conducted by a very small and light copper pipe, horizontally to a point a little below the rudder. This pipe is sustained by wires, and as the wind will be invariably ahead, will effectually prevent any danger from the sparks.

The area of the circumference of the balloon is about two thousand feet, and the length being equal to ten times its diameter, it may be propelled fifty miles an hour, by the power that would be requisite to propel a cylinder of the same diameter five miles in the same time, being a uniform pressure of about one ounce to a square foot, or one hundred and twenty-five pounds to the whole area—less than the power of one horse. Hence I infer that the ten horse power engine will be sufficient to propel this balloon at least fifty miles an hour, or stem the current of a heavy gale of wind.

The buoyancy of the balloon is	34,000 lbs.
I estimate the weight of the sheeting, varnished, (4000 yds.,) at	4,000 do.
The wooden rods used in the construction	1,500 do.
Stage, cabin, fan-wheels, and cordage, ...	5,000 do.
Engine, boiler, water, and fuel,	4,000 do.
	14,500
Balance of buoyancy . .	19,500 lbs.

sufficient to carry one hundred passengers, with baggage and provisions. I am aware that no estimate approaching to accuracy can be made of the expense of constructing such a balloon, but it is readily ascertained that the expense of the materials (exclusive of the steam engine) would be less than three thousand dollars. A suitable engine would cost two thousand. If then we allow five thousand for preparing, constructing, arranging, and adjusting the several parts, and the expense of inflation, the amount (10,000) is less than the cost of an ordinary ferry boat.

With regard to management, the balloon is to be kept continually inflated, (except in winter,) having on board apparatus for the production of hydrogen gas, and a pipe for conveying the same to the interior of the balloon whenever occasion requires. It is not to be brought to the ground in any case, but moored, when not in use, with a reason-

able length of halser, furnished with a self-adjusting pulley. When passengers are to be received or landed, the balloon is brought near the ground, and the passengers are drawn up or let down by a small car, or circular settee. Each passenger is furnished with a parachute, by which each may safely land in case of extreme disasters. This will render their situation less critical than that of those who are exposed to the perils of a raging sea in a leaking ship. Moreover, the stage is furnished with several light hollow cylinders, or sacks of air, of sufficient buoyancy to support the stage with the passengers, should it chance to descend upon the water.

It is obvious, that when passengers are received, a corresponding weight of ballast must be discharged, and vice versa: yet the balloon will admit of a degree of contraction or expansion, by means of cords, sufficient to counterbalance the consumption of fuel and water.

Such is my plan for flying; and as the immortal Fulton ventured to build a steamboat seventy years after Jonathan Hulls had published his plan for the same, I shall indulge the hope that some enterprising person will within another seventy years build and put in successful operation a manageable balloon. And as Fulton experienced some difficulties in securing the patent, on account of the want of originality, I have no hesitation to offer, and promise, at least, an undivided half of my claim to the patent, to any person or company who will be at the expense of building such a balloon on a scale sufficient to test its utility.

Respectfully yours,

RUFUS PORTER.

Billerica, Mass., Sept. 23, 1834.

N. B.—The balloon represented in the plate is 250 feet in length, and 50 in diameter: it being inconvenient to make the drawing correspond in proportions with the description.

The Principles and Practice of Constructive Carpentry, being a Full and Complete Treatise on the Theory and Practice of Carpentry and Architecture, compiled from the Works of Tredgold and Nicholson, and other Authorities, with the Latest Improvements in every Branch of the Art. Royal 8vo. No. 1: New-York, W. NORRIS, 1 Nassau street.

It has ever been our decided opinion, that a most important part is performed, in the extension of knowledge, and in promoting the general advancement of society, by the publication of treatises on the mechanical arts.

Mathematical, like every other kind of science, remains a dead letter until it be applied "to the business and affairs of men;" on the contrary, however, when it is applied to the useful arts, it extends the views of the artist, substitutes certainty for uncertainty, security for insecurity; it informs him how to raise the greatest works with confidence, and how to produce stability with economy, or, in its own language, how to obtain a maximum of strength with a minimum of materials.

There is perhaps no class of mechanical arts so directly capable of receiving improvement from the researches of men of science, as those connected with building; neither is there any that has received a greater share of their attention. But these researches have not benefitted practical men in proportion to the extent to which they have been made. They are too often given to the world in works which are either so expensive as to be inaccessible to the greater number of men of business, or so completely scientific as to be almostuse less to all but men of science themselves. Something may also be attributed to a kind of distance and jealousy which appears to exist between theoretical and practical men; and which has, perhaps, sometimes prevented the practical mechanic from benefitting by scientific researches, the results of which have been within his reach. But these prejudices are fast wearing out. Of this fact we need no better proof than the encouragement which begins to be given to popular treatises on mechanics, to mechanics' magazines, and to the formation of mechanics' institutes.

One or two attempts have already been made to treat the subject of CARPENTRY on mathematical principles. "The Carpenter's Guide," by Peter Nicholson, is a very excellent and justly popular work, but it is almost entirely confined to what is termed "finding the lines;" and although it fully developes the methods of geometrical construction, it does not enter at all into those mechanical principles, a knowledge of which is necessary to enable a carpenter to tread with certainty and economy out of the usual routine of his operations. This part of the subject has, however, been taken up in "Elementary Principles of Carpentry," by Thomas Tredgold, civil engineer; and he who possesses these two treatises, and can understand them, need scarcely wish for any other work upon the subject. But in both of them, especially in the latter, a great many algebraic formulæ are used, which but few practical carpenters or builders understand: moreover, to purchase both of those works may be beyond his means, especially at that period when it is most desirable that he should be in possession of such works.

The work before us is intended to combine the whole substance of both these treatises, with such additional matter as may have been accumulated since the time of their publication. Something is promised on the construction of canal locks and water wheels. The architectural part will also be more full than is general in such works. The number just published contains a short system of practical geometry, with part of a treatise on the equilibrium and pressure of beams, illustrated by three copper-plate engravings. The mechanical principles are exhibited in a plain and simple manner, mathematically correct, yet without requiring more previous mathematical knowledge in the reader than is necessary to work a rule-of-three question. The general object of the work is well expressed in the following extract from the prospectus:

"The work is compiled with especial reference to the operative carpenter. It is intended for the use of the workman or the apprentice who may wish to gain a more extensive knowledge of his art, and who may aspire to such skill and information as will enable him to design and execute the greatest works with elegance and durability, and in due time to assume the highest standing in his profession—a point which any man may honestly aim at, and to which a good resolution and vigorous exertion, properly directed and persevered in, will seldom fail to conduct him. To aid such laudable efforts is one great object of this work. But it is not to the carpenter only that an acquaintance with the principles of construction is useful—such knowledge is almost equally necessary to the architect, the civil engineer, and all persons in any way connected with building. 'Construction is the anatomy of architecture; it is the very base upon which the art of design must be founded, and on the nature of the base must depend the excellence of the superstructure.'

"Although the 'Principles and Practice of Constructive Carpentry' will be compiled in such a manner that it may be readily comprehended by a mechanic of the humblest education, it will contain much practical matter, both original and copied, that will be of great utility to individuals of higher acquirements; and much useful information, which can only be obtained by long experience, or which lies scattered through a number of expensive volumes."

The proposed arrangement of the work is excellent, beginning with simple principles and regularly progressing to the most elaborate workmanship. The typographical execution is of the first quality, and the publisher appears to have spared no expense in order to bring the subject in as clear and pleasing a manner before the physical, as the writer has brought it before the mental eye of the reader.

We would earnestly recommend the study of such works as this to all mechanics. No man can know too much concerning the business by which he obtains his bread, and on which hangs all his hopes of rising in the scale of society. Other kinds of knowledge *may*, this is *sure*, to be useful to him. Such knowledge he *must* possess, if he would ever rise beyond mediocrity in the exercise of his art. And to those who are not already in possession of good works of the kind, we would recommend "the Principles and Practice of Constructive Carpentry." The method of publication, in monthly numbers, 25 cents each, renders it accessible to every one; and, from what we have already seen of it, we have no doubt that it will prove a most useful and practical work.

MAHOMEDAN MONTHS.—In chronology and history, as well as in all public documents, the Mahomedans use months of thirty and twenty-nine days alternately, making the year thus to consist of 354 days. Eleven times in thirty years one day is added to the last month, making 355 days, therefore, in that particular year. In common reckoning the year is purely lunar, consisting of 12 months, each one commencing with the appearance of the new moon, without any intercalation to bring the commencement of each year to the same season.—[Scientific Tracts.]

TENACITY OF LIFE.—Edwards, a celebrated experimental physician of France, not long since deprived two Salamanders of their hearts, and then placed them in water of the same temperature, which had been deprived of air by boiling, and two others in air. One of the former died in eight hours, the other in nine, while those in the open air lived from twenty-four to twenty-six hours. By repetition the same results were presented, by which he infers that air, in comparison with water, has a superior vivifying influence upon the system of these animals, independently of its action by means of circulation and respiration.—[Ib.]

[From the Repertory of Arts.]

Specification of the Patent granted to ROBERT STEPHENSON, *of Newcastle-upon-Tyne, in the County of Northumberland, Engineer, for a certain Improvement in the Locomotive Steam Engines now in Use for the quick Conveyance of Passengers and Goods upon Edge Railways.*—Sealed October 7, 1833.

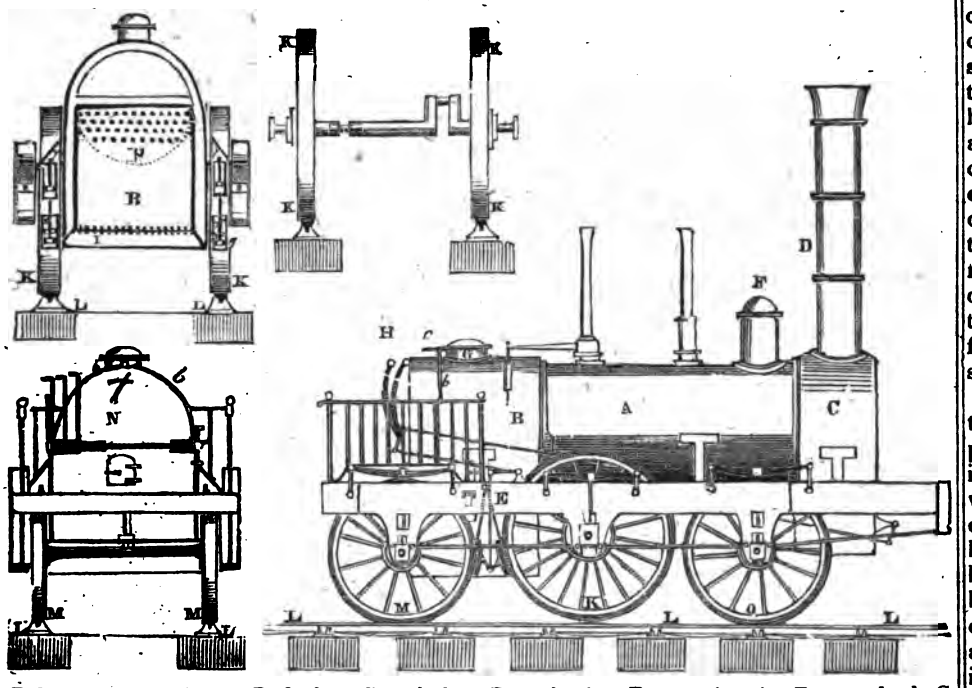
My improvement in the locomotive steam engines now in use, for the quick conveyance of passengers and goods upon edge railways, is applicable to that kind of locomotive engines which are used in the Liverpool and Manchester railway (the first of which engines was called by the name of the Planet), having the two main wheels, which are impelled by the engine, fixed on a double cranked axis, and turned round by the force of the pistons of the steam cylinders, in order to advance the locomotive engine along the edge rails, whereon the said main wheels bear. And my said improvement consists in making the said main wheels of the locomotive engine (which are fixed as aforesaid) on the ends of the cranked axis, and impelled by the force of the pistons, with plain tires to run upon the edge rails, without any projecting flanges on those tires, and applying two additional small wheels with flanges on their tires, beneath the hinder end or part of the engine, in order to cause that end of the engine, by means of those flanges, to keep straight upon the rails, as it runs along thereon, and also to bear up part of the weight of the furnace end of the boiler, in the same manner as the present two small wheels (by means of their flanges) keep that end of the engine straight ou the rails, and bear part of the weight at the chimney end of the boiler, where the steam cylinders are situated. And also consists in applying the force of small extra steam pistons, or plungers, fitted into suitable cylinders, which, by turning a cock, can be supplied when required with steam from the boiler, in order to act upon a double brake, or pair of clogs, which are applied to the circumferences of the tires of the said main wheels without flanges, and of the two said additional small wheels with flanges, so as to press the said brakes or clogs in contact with the said circumferences, and thereby cause friction and resistance, which will tend to retard the motion of the wheels, and consequently the advance of the engine, along the rails, in order to stop the same when required.

The object of my said improvement is to obviate or diminish some inconveniences which have been experienced in the use of such locomotive engines, for the quick conveyance of passengers and goods on the said Liverpool and Manchester railway, namely, that the cranked axles of the great wheels have been found liable to break, and then the engines run off the rails, and sometimes overturn, or are otherwise injured. They have, also, in some cases run off the rails when the cranked axle has been only strained, without being actually broken; also, it is found difficult to hold on with the clogs or brakes to the wheels of such locomotive engines, according to the manner whereby the brakes are usually applied by hand, with sufficient force and steadiness to retard the engines from advancing along the rails, as much as is desirable, in order to arrest their motion as suddenly as possible when they have been travelling rapidly, and particularly in the event of arriving at a broken or deranged part of the railroad, or on any other occurrence which may occasion danger of collision with obstacles or other carriages, if the motion were not stopped with promptitude; and also the boilers of those engines have burned out very rapidly, in their internal tubes, so as to have occasioned great expense and loss of work in repairing them.

My said improvement in such kind of locomotive engines will tend to obviate or diminish the said inconveniences, for by using plain tires, without flanges, for the main impelled wheels (and which has never been done before in such engines on edge railways), the cranked axles of those wheels will not be subjected to any strain endways, in the direction of its length, when the engine enters into sidings, turnings, and crossings of the rails, or passes along curvatures in the line. * * * * * *

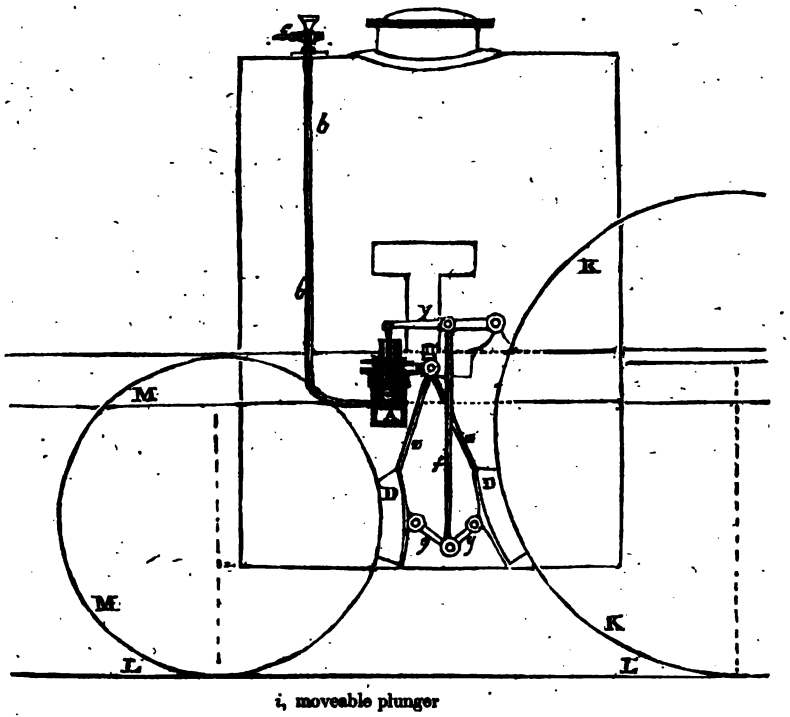
* * And by applying the pressure of steam from the boiler to act within hollow cylinders, upon pistons or plungers fitted into those cylinders, so as by the motion given to those pistons by the steam, when admitted into the said cylinders, to force the brakes or clogs against the edges of the wheels, in order to retard the same, by causing friction, and thereby stopping the advance of the locomotive engine on the rails. The stopping may thereby be effected with more promptitude, and with less trouble and effort than by the ordinary mode hitherto practised, of applying the clogs or brakes by the strength of the man who attends the engine; for, according to my improvement, the man, when warned of any danger, requiring the locomotive engine to be stopped as suddenly as possible, after having as usual stopped off the supply of steam to the engine cylinders, will have nothing to do in order to apply the brakes or clogs but to turn a cock in a small steam pipe, which conducts the steam from the boiler into the said hollow cylinders, wherein the said pistons or plungers are fitted, and the steam being (by opening the cock) admitted to act upon those pistons or plungers, will bring the clogs or brakes into action, with far more effect than can be done by the common mode of pressing them against the wheels by handle levers, actuated by man's strength; and also according to my improvement, the man, after having opened the said cock, and so brought the brakes or clogs into action by the force of steam, will have his hands at liberty to do any other duty that may be required of him whilst the engine is stopping. And note—the same effect may be produced by admitting water from the boiler, by a pipe and cock as aforesaid, into the said hollow cylinders, in lieu of steam, because the pressure of the water will produce the same effect on the pistons or plungers, and clogs or brakes, as that of the steam. And in order to release the said clogs, or brakes, and take them out of action, the aforesaid cock must be shut, to cut off the communication from the boiler to the hollow cylinders, wherein the pistons are to act, and another cock being opened to permit the steam (or water) which has operated in the hollow cylinders, to escape therefrom into the open air, and allow the pistons or plungers in those cylinders to return and release the brakes or clogs. The additional small wheels which I apply beneath the hinder end of the boiler, will sustain the extra weight of a larger boiler than heretofore used, without distressing the rails; and bearing springs are to be used for the extra small wheels, the same as is now done for other wheels in the ordinary engines, and the said springs will cause all the six wheels to apply and bear fairly on the rails, and ease all jolts and concussions. The relative weights or portions of the whole weight of the engine, which shall be borne by each of the six wheels being regulated by the strength and setting of their respective bearing springs. The main wheels which are to be impelled by the power of the engine being in all cases left loaded with as much of the weight of the engine as will cause a sufficient adhesion of those wheels to the rails to avoid slipping thereon. When by virtue of my improvement a larger boiler is used, containing more heating surface than heretofore, a less intense excitement of the combustion will be required in order to produce the necessary quantity of steam for the supply of the engine, and that diminution of the intensity of the combustion will be advantageous to the performance of the engine for another reason, as well as by avoiding the heretofore rapid burning out of the metal of the boiler, because the jet of waste steam (which is thrown into the chimney to produce a rapid draft therein, and a consequently intense combustion of the fuel,) may be greatly diminished in its velocity, and thereby the waste steam will be allowed to escape more freely from the cylinders than heretofore, when a very sharp and sudden jet of the waste steam up the chimney is found absolutely necessary to excite that intense violence of combustion which can alone enable the present boilers to yield the requisite supply of steam, but that very sudden jet can only be obtained by throttling the eduction passage, and thereby impeding the free discharge of the steam from the working cylinders, so as to impair the force of the pistons; and at the same time, the excessive combustion which is excited (by so impairing the force of the pistons), also destroys the metal of the boiler in a short time. Increasing the magnitude of the boiler, giving a larger extent of heating surface thereto, and working the enlarged boiler with a more moderate intensity of fire, is the true remedy, and will save fuel as well as avoid the rapid destruction of the boiler, because the steam will be allowed to escape more freely from the cylinders. The adoption of larger boilers in the said locomotive engines, with all the advantages to be derived therefrom, as aforesaid, depends upon the application of the two additional small wheels beneath the furnace end of the boiler, because the present engines are already too heavy on the rails, and require a diminution of weight instead of an augmentation. But I wish to be understood, that I do not claim the use of six wheels instead of four, as an improvement merely for better supporting the weight distinct from other circumstances hereinbefore set forth, but I claim the using of large wheels without flanges on their tires, which wheels are to be fixed on the cranked axle to serve for the impelled wheels of locomotive engines, which are to travel on edge railways, and in conjunction therewith, (but not without that conjunction;) the application of a pair of extra small wheels, with flanges on their tires, beneath the hinder end of the boiler, with interposed bearing springs, like those of the other wheels; that application of extra small wheels with flan-

Sheet I.



References.—A, the boiler; B, fire-box; C, smoke-box; D, smoke-pipe; E, suspension pin; F, steam head; G, man hole; H, working gear; J, fire grate; K, main impelling wheels; L, M, extra small wheels; N, throttle valve; P, tubes.

Sheet II.



i, moveable plunger

ges, conjointly with the said using of large impelled wheels without flanges, being for the purpose of keeping the engine straight on the rails when it runs forward, as well as for bearing up part of the weight. And also I claim, as part of my said improvement, the application (as hereinbefore described) of the pressure of the steam or water from the boiler, to act when required in hollow cylinders on pistons or plungers, which are connected with the clogs or brakes for the wheels, so as to bring the said brakes or clogs into action by the pressure of the steam instead of by the strength of men, as heretofore done. Note—I make no claim to the use of six wheels in locomotive engines to travel on edge railways, if the impelled wheels have flanges, but only when the said impelled wheels have no flanges; and for the more complete explanation of my said invention, I have hereunto annexed three sheets of drawings, (No. 3 is omitted in the engravings,) representing two locomotive engines for the quick conveyance of passengers and goods upon edge railways, when constructed according to my said improvement.

Sheet I. contains a side elevation, end elevation, and end section of such an engine. K are the main impelled wheels on the cranked axle, without any projecting flanges on the tires, which run on the edge rails. L, M, are the extra small wheels with flanges, applied beneath the hinder or furnace end of the boiler; and o are the ordinary small wheels with flanges beneath the chimney end of the boiler, where the working steam cylinders are situated. The small wheels, o and M, with flanges, keep the engine straight on the rails as it runs forwards thereon; and the large impelled wheels, K, have only to advance the engine forwards, and to bear a due portion of its weight, without having any thing to do with keeping the engine on the rails, having no flanges which can hold laterally on the rails; wherefore the cranked axle of the wheels, K, is liberated from all stress by any lateral action of the great wheels K against the edges of the rails; and the small wheels, o M, with flanges, (which wheels have straight axles,) sustain all the stress of that lateral action.

Sheet II. contains a separate drawing of the brake or clog, which is also shown in its place in sheet I. A is the hollow cylinder into which a plunger is fitted, to act by a lever, *y*, and an upright rod, *f*, upon the two clogs or brakes, D, D, which are suspended by pendulous links, *z*, from a centre pin or bolt, E, fixed to the frame. The clogs or brakes, D D, are caused to apply to the circumferences of the tires of the wheels, K, and M, by means of links, *g*, *g*, which are interposed between the two clogs or brakes, D, D, and which links, when put down into an angle, as shown in the figure, leave the brakes or clogs, D, D, free of the wheels, K, and M; but when by opening the cock, *c*, the stream from the boiler is admitted through the pipe, *b*, *b*, into the hollow cylinder, A, it raises up the plunger therein, and that by its lever, *y*, and rod, *f*, draws up the links, *g*, *g*, towards a straight line, and then they force the two clogs or brakes, D, D, apart from each other against the wheels, K, and M, with an increased force beyond that which the plunger exerts; that increase of force being in consequence of the leverage at *y*, and the oblique direction of the links, *g*, *g*. When the handle of the cock, *c*, is turned the other way, it allows the steam to issue through an upright spout, and escape from the cylinders into the open air.

Enrolled December 3, 1833.

Zincography.—It was but a few years past that we had to record an advance in the fine arts in the invention of lithography, which afforded increased facilities in the art of engraving. Lithography is now, however, likely to be displaced, at any rate to a great degree, by the invention of an ingenious Frenchman. M. Breugnot, who has succeeded in preparing a composition of metal, the basis of which is zinc, upon which drawing and writing can be effected with equal, if not with greater facility, than upon stone, and as easily applied to paper with the same machinery. The art of zincography has several advantages over that of lithography; among others, in the portability and comparative cheapness of the plates, over the necessary bulkiness and cost of stone. These plates can even be adapted to a lady's portfolio, to any thickness, and to any size—a desideratum much wanted in lithography. The invention of zincography has received the sanction of the Royal Academy of Paris, and we understand that M. Breugnot has sold the patent for Great Britain to Mr. Chapman, of Cornhill, who feels confident that he shall be able to adapt this improvement to every department in the art of engraving. In Paris they have already succeeded in printing large window blinds with one plate, and we believe experiments have been made on silk and cotton, which warrant the supposition that zincography will soon be applied in our silk and cotton printing establishments.—[Lon. Morn. Herald.]

NEW-YORK AMERICAN.

DECEMBER 13—19, 1834.

LITERARY NOTICES.

ENGLISH HISTORY, adapted to the use of Schools and Young Persons; BY THE AUTHOR OF AMERICAN POPULAR LESSONS. New York: R. LOCKWOOD.—A new school book on English history may seem unnecessary, and yet from the partial examination we have given to this one, we must say that it seems to us a well arranged and well digested compendium, in which all important facts are enumerated, and withal, the moral character and influence of the nation, and of events, are suitably dwelt upon. It is principally derived, as the preface informs us, from "Mrs. Markham's History of England," confining it however to purely English History, and referring for instance all the details of the American war of the Revolution, to American History.

THE FRANKLIN LIBRARY OF MODERN LITERATURE; Parts I. and II. New York: WALLIS & NEWELL.—These are the first numbers of a new enteprize, to be published weekly, and having for object the republication in a cheap form of "the popular new works of the most celebrated English authors."—The two numbers before us, are devoted to selections of tales from English annuals of this year, and thus for 25 cents, (the price per number being 12 1-2 cents) furnishing the cream of these literary *bijoux*.

THE WORKS OF MRS. SHERWOOD. Vol. VII. Uniform Edition. HARPER & BROTHERS, New York.—This volume contains with many of Mrs. Sherwood's earlier stories, her latest work, *The Nun*, which is remarkable, as has been before observed in this paper, by the identity of the catastrophe of the story, with the destruction of the Ursuline Convent at Charlestown. Yet among the agents of that outrage, not one probably had ever read or heard of Mrs. Sherwood's book. Human nature, however, is pretty much the same every where, and alike in Sardinia and in Massachusetts, the agency of a mob is always blind and formidable.

THE QUARTERLY JOURNAL OF AGRICULTURE, MECHANICS AND MANUFACTURES, vol. I, No. II. New York: MINOR & CHALLIS.—This is a publication which cannot fail to spread light along its path, and to scatter much useful information. Its title explains its objects, and in the number before us, only the second in the series, there is matter which will be found worthy the attention of the great and numerous classes for which it is especially designed, the farmer, mechanic, and manufacturer.

THE EDINBURGH REVIEW for October, being No. 1 of vol. 1 of *Foster's Republication*. New York: T. FOSTER.—This number of the Edinburgh contains the paper ascribed to the pen of Lord Brougham on "the last session of Parliament," which so much irritated Lord Durham, as to induce him to write the letter to the publisher of the Review, which we copied some weeks ago from a London Journal. It has another most interesting article on "the Improvement of Inland Transportation and Railroads," from which we make copious extracts in our outer columns to-day. We renew our recommendation of this Republication.

LIFE OF PRINCE TALLEYRAND. 1 vol. 8vo. *Philadelphia:* CAREY, LEA & BLANCHARD.—We confess our surprise at finding such a book as this republished by so respectable a press as that of *Carey, Lea & Blanchard*. It is utterly unfit to go into any decent house: it is made up, so far as the record of the early life of M. Talleyrand is concerned, of gross and filthy details of debauchery; and in the incidents purporting to be historical, of his political career, it is unworthy of credit. *Videcq's* Memoirs, and *McDonell's* Journal, are the only fitting types that occur to us of this slop-pail of scandal, indecency, and calumny.

STEPHEN MORELAND, a Novel; 2 volumes, 12mo; Philadelphia, KEY & BIDDLE.—A new American novel here claims, but fails to arrest attention. It is alike feeble and barren in incident, character, dialogue and description. It treats of Masonry and Anti-masonry—of Orthodox Quakers and Hicksites—of sleighing parties, where highbred young ladies sit in gentlemen's laps—of cotillions, where a lady stands in the centre to be kissed by the gentlemen—and of other *American* usages, which it has not been our fortune to hear of except in these pages.

THE SYBIL'S LEAVES FOR 1835, by MRS. COLEY.—These are Conversation Cards for young people of the two sexes. The difference of color designates those for the lady and the gentleman; and thus—each holding the proper set—cards drawn at hazard may be the occasion of producing some merriment, and at any rate of whiling away an agreeable hour.

They are printed by the Harpers.

LETTERS TO A GENTLEMAN IN GERMANY, written after a trip from Philadelphia to Niagara.—Edited by FRANCIS LIEBER, 1 vol. 8vo. Philadelphia: CAREY, LEA & BLANCHARD.—This is a very agreeable book, rambling, sprightly, anecdotical, and withall interspersed with much useful and practical information, and keen and accurate observation. It is no violation of courtesy to assume that the Editor is really the writer of these letters—and the personal adventures, narrated without any avoidable egotism, of this intelligent, learned, and thinking wanderer, are not the least interesting portions of the volume. The views incidentally expressed concerning the people, habits, and institutions of this, his adopted country, are, we think, for the most part, just—tho' sometimes flattering.

On the subject of the American ladies, he thus discourses:

You wish the ladies described too? I know that we wish as much to become acquainted with the appearance of the female sex of a country as with their character. But this is no easier task than to give, in a few lines, a description of the scenery of a country; it is, in fact, much more difficult. Yet I will try it; only remember that descriptions of this kind are to be taken as general assertions, admitting of innumerable exceptions. To begin then.—It must be allowed, in the first place, that American women have generally a fine, and—more frequently than the women of other countries—a genteel, rarely an imposing appearance. Their shoulders are generally not wide enough, and too sloping; their busts not sufficiently developed, but the waist is small, round, and the lower part of the body finely formed; their feet are not peculiarly good—they are better than German feet indeed, and better than English. Yet so capricious are exceptions! The smallest pair of correctly shaped feet, so small as would be justly criticized if an artist were to give them to a work of his imagination, and the neatest pair of ankles, "turned by Cupid," with corresponding hands and wrists, that I ever beheld, I saw on this side of the Atlantic. A pair of feet which might induce an admirer of the beautiful to sing to them, as Conti sung only of the hands of his mistress. I will give you a letter of introduction to these lovely feet and hands and arms, if you come to this country. In the mean time I send you a glove of their mistress, which she once gave me with grace: honor it duly, and feel unbounded obligation for my parting with the memento.

Their walk is much better than the ungraceful dipping and pitching of the English ladies, which looks rather like an unsuccessful attempt at a gallop than a walk. However, for feet and walk you must go to Andalusia: what is there equal to *la gracia andaluz?*

"Their very walk would make your bosom swell;
I can't describe it, though so much it strike,
Nor liken it—I never saw the like.—
An Arab horse, a stately stag, a barb
New broke, a cameleopard, a gazelle—
No—none of these will do."

Their arms—where are fine arms any longer to be found if not by way of exception? Sleeves have spoiled them. Their color—I do not now speak especially of the arms—is generally delicate, which contributes to give, even to the lowest classes, an air of gentility. An English face here is known directly by its florid color; and it is sometimes very agreeable to meet with a rosy cheek lately arrived. Their eyes are not as large as the Spanish, nor *ojos adormidillos*, yet they are fine, well cut, and well set, and of much mental expression. They look bright, and are generally of a fine dark brown color. The general expression of the face is again that of handsomeness and delicacy rather than of great and striking beauty. From all this you will see that American ladies look better in the street than in the ball-room, yet I can assure you you find there also many charming faces. It is a peculiarity of the United States which has often struck me, that there are more pretty girls than in any other large country, but fewer of those imposing beauties which we meet in Europe, and who have their prototypes in a Mad. Recamier or Tallien, or the beautiful Albanian, when I saw her in Rome, or even as you find many in the figures of the women in the marine villages near Genoano, which made a Thorwaldson rave—beauties which "try man's soul," which will not depart from the mirror of your mind, and disturb your quiet, though your heart may be firm as a rock. After all, I come back to my old saying, there is no European nation that can—taken all in all—compete for great beauty with the English, as there is no nation where so many pretty and delicate faces as are seen as in the United States.

DUNLAP'S HISTORY OF THE ARTS OF DESIGN IN THE UNITED STATES.—(*Second Notice.*)—A further examination of these volumes, confirms the opinion already expressed, that this publication of Mr. Dunlap will prove one of the most popular works that has for a long time issued from the American press. The work is of too comprehensive a character, however, to attempt a fair review of it in limits so restricted as ours; and we shall, therefore, only touch upon such portions as may particularly interest our readers. Among these, there are are few more acceptable to a New-Yorker, than those which relate to the three young and eminent artists, whose fame is so intimately identified with the taste and *appreciation* of this city. INMAN, and COLE, and WEIR, differ so in their respective styles, that much as each is admired, we do not recollect ever to have heard a single invidious comparison instituted between them. The soul that breathes in Inman's portraits—the life that quivers in Cole's foliage, and the *atmosphere* that embalms Weir's figures and landscapes, are all so redolent of genius, as to mark a distinct and original character in the productions of each. The age, too, of the trio, is nearly the same; the subjects in which they most excel are alike American; and there is scarcely a private collection of the works of native artists, which is not graced alike by the pictures of the three.

Inman, who was born at Utica in this State, attained a reputation at an early day, when as the pupil of Jarvis, he illustrated with bold and glowing hand some of the most characteristic passages in the Sketch Book; and a vivid scene or two in the first of Cooper's novels. He is now chiefly known as the most spirited of portrait painters, but his varied powers are sufficiently marked to have elicited the remark here recorded by Mr. Dunlap, from the lips of one of the most eminent and experienced judges of art in the country.

The versatility as well of excellence of Mr. Inman as an artist, was once expressed to me by Mr. Sully in nearly these words, "I remember going round your exhibition of the National Academy at Clinton Hall in New York, and seeing a fine landscape, I asked, 'Who painted this?' The answer was, 'Inman.' Then I came to a beautiful group of figures—'Ah, this is very clever—let us see whose this is,' I looked at my catalogue,—'Inman.' Then some Indians caught my eye—catalogue again—'Inman.' A little further on, and I exclaimed 'By George, here is the finest miniature I have seen for many a day?' it was a lady in black, 'Who is this miniature painter?' 'Inman.' His large portraits I was acquainted with, but this variety of style took me altogether by surprise."

The venerable Col. Trumbull was the first that discovered the singular merit of Cole, whose life is a per-

fect romance; but we must refer the reader to the work for the particulars. His grandfather was a Maryland farmer, but he himself, like Leslie, was born in England of American parents. He grew up amid the backwoods of Ohio, and it was in her deep forests, beneath the glowing skies of the West that he drank in that inspiration, which makes his autumnal woods and American sunset so perfect and *unique*. No painter ever dared to paint these subjects as they are until Cole's bold pencil essayed them, and with every attempt since made by others, they are still peculiarly his own. It has been stated that his forest scenes were condemned in England because her connoisseurs cannot believe such tints to exist in nature. We remember hearing an intelligent Englishman and an enthusiastic admirer of Cole prophecy this fate for his pictures, when he heard that hey were to be exhibited at Somerset House. The early school of this artist was NATURE alone, and his may account for the severity of his strictures upon the present state of art in England, written after he had had an opportunity of studying the best masters in Italy. They are thus introduced by Mr. Dunlap.

The opinions of Mr. Cole on the subject of landscape, I look upon as the highest authority: as I consider his mind of the first order, and his works in that department of art, superior to those of any painter of the present day, that have come under my inspection. His words are:

"A great deal might be said on the subjects of England and Italy; but to say that which will be most available to you may be difficult. I did not find England so delightful as I anticipated. The gloom of the climate, the coldness of the artists, together with the kind of art in fashion, threw a tone of melancholy over my mind, that lasted for months, even after I had arrived in sunny Italy.

"Although in many respects, I was delighted with the English school of painting, yet, on the whole, I was not disappointed: my *natural* eye was disgusted with its gaud and ostentation: to colour and chiaro-scuro all else is sacrificed—design is forgotten; to catch the eye by some dazzling display, seems to be the grand aim. The English have a mania for what *they* call generalizing; which is nothing more nor less than the idle art of making a little study go a great way, and their pictures are generally things "full of sound and fury, signifying nothing." The mechanical genius of the people exhibits itself in the mechanism of the art—their dextrous management of glazing, scumbling, &c. Frequent and crowded exhibitions of recently painted pictures, and the gloom of the climate, account for the gaudy and glaring style in fashion. There are few exceptions among the artists of England to this meretricious style; even Wilkie and Leslie, in their late pictures, have become more washy and vapid than in their former productions.

"These opinons of existing English art, I know may be considered heterodox; but I will venture them, because I believe them correct. The standard by which I form my judgment is—beautiful nature; and if I am astray it is on a path which I have taken for that of truth.

WEIR, who has lately succeeded Leslie at Westpoint, was born at New Rochelle in this State. His delicious Italian landscapes made him first generally known after his return from Europe; but his reputation has since then been much enhanced by several fine original productions. He has lately painted three admirable pictures for the Hon. G. C. Verplanck; and "Bourbon's last March," one of the three, is a composition that would become the hand of any master. Mr. Dunlap's opinion of Weir's merit, with an account by Dr. Francis of one of his most celebrated productions, is given in the following interesting extract:

Mr. Weir has produced a great many finished pictures since his return from Italy, several of which have been engraved. His "Red Jacket" is well known. This chief of the Senecas exhibited a fine specimen of savage manners when he came with his attendants, or companions of the forest, to the painter's room. He seated himself down on an ample armchair with the nonchalence of a superior, and his wild tribes-men surrounded him. "It becomes not not me," says Dr. Francis in a letter to the author, "to speak of the peculiar merits of the painting of Red Jacket, (Saguoaha, or Keeper-awake) by Weir. It is admitted, by the competent, to eclipse all other delineations of our Indian chiefs, and demands, as a work of art, no less regard than the subject himself, as one of pre-eminent consideration among our aborigines. The circumstances, however, which gave the artist the opportunity of portraying the distinguished warrior and great orator of the Senaca nation, deserves at least a short notice. An acquaintance of some years with Red Jacket, which was tempered, perhaps, more impressive in his recollection by occasional supplies of tobacco, led him to make an appointment with me, to sit for his picture upon his arrival in the city. When he came to New York, in 1828, with his interpreter, Jamieson, he very promptly repaired to the painting-room of Mr. Weir. For this purpose he dressed himself in the costume which he deemed most appropriate to his character, decorated with his brilliant overcovering and belt, his tomahawk and Washington medal.—For the whole period of nearly two hours, on four or five successive days, he was as punctual to the arrangements of the artist as any individual could be. He chose a large arm-chair for his convenience; while his interpreter as well as himself, was occupied, for the most part, in surveying the various objects which decorated the artist's room.—His several confederates, adopting the horizontal posture, in different parts of the room, regaled themselves with the fumes of tobacco to their utmost gratification. Red Jacket occasionally united in this relaxation; but was so deeply absorbed in attention to the work of the painter, as to think perhaps of no other subject. At times he manifested extreme pleasure, as the outlines of the picture were filled up. The drawing of his costume, which he seemed to prize, as peculiarly appropriate, and the distant view of the Falls of Niagara, (scenery nigh his residence at the Reservation) forced him to an indistinct utterance of satisfaction. When his medal appeared complete, he addressed his interpreter, accompanied by striking gestures; and when his noble front was finished, he sprang from his seat with great alacrity, and seizing the artist by the hand, exclaimed, with great energy, 'Good! good!' The painting being finished, he parted with Mr. Weir with a satisfaction apparently equal to that which he doubtless, on some occasions, had felt, in effecting an Indian treaty. Red Jacket must have been beyond his seventieth year when the painting was made: he exhibited in his countenance somewhat of the traces of time and trial upon his constitution; he was, nevertheless, of a tall and erect form, and walked with a firm gait. His characteristics are preserved by the artist to admiration; and his majestic front exhibits an altitude surpassing every other I have seen of the human skill. As a specimen for the craniologist, Red Jacket need not yield his pretensions to those of the most astute philosopher.

The following passage "shows up" a distinguished American trio in London, and accounts very naturally for Leslie's so soon giving up his situation at West Point:

Washington Irving, Esq., has told me that on arriving from the continent of Europe, where he had been some time, he found Newton and Leslie in the same house, and that while he was writing his Sketch Book, he saw every step they made in their art, and they saw every line of his writing. Here was a communion of mind that could not but lead to excellence. Irving's admiration of Leslie, both as a man and an artist, is extreme. A cultivated mind, purity of moral character, refined taste, indefatigable study, by which his knowledge of drawing and skill in composition were such, that having determined his manner of treating a subject, and drawn it in, no change or alteration took place; in this a perfect contrast to his friend Newton.

I have above said, that Mr. Leslie returned to London. In the only interview I had with him, which was in my sick chamber a day or two previous to his embarkation on his return, he did not express any feeling of disappointment. With the government of the United States he certainly had no cause of complaint. He was invited to West Point as *teacher* of drawing, with the same emoluments and accommodations which his predecessos had enjoyed. But his friends, anxious that he should be with them, had assured him that the teachership would be made a professorship, with additional advantages corresponding with the other professors, and that a painting room should be built for him. But in our representative government, this required an act of Congress, and the passage of the yearly appropriation bill. This act and appropriation was intended; but Mr. Leslie had taken post at West Point, at the commencement of winter, with his family, never before out of London. The winter is a trying season in a bleak situation on the Hudson—a situation at other times redundant with charms. Mrs. Leslie is a London lady, and her family remained occupants of the house left by the artist; her heart was naturally at home. Leslie, I am told, upon an answer from the Secretary at War, that he could not order a painting room built until appropriation was made for it, gladly resigned the situation, and took his family to London again, no doubt happy to escape from the bleak promontory on which they had passed a discontented winter.

There are several other favorite artists, like Doughty,—the softest painter of sleepy summer moontide, or Callin, the bold wanderer in the far West, who has been so long taking "full lengths" of the praries,—whose names seem to claim a passing paragraph. But they all receive due honor from our author, and we refer the reader to his work accordingly. The encomium passed by Mr. Dunlap upon Miss Hall, will be fully acknowledged by all admirers of miniature painting who have had an opportunity of observing how the exquisite touch of Malbone's pencil lives again in her gifted hand.

Among the most interesting passages of the book, are those relating to Allston, of whom the following, among other anecdotes, is told:

Mr. Allston returned to America in 1809. When Robert W. Weir, Esq. of New York, was studying his profession in Rome, many years after Allston left it, the artists of Rome asked him after an American painter, for whom they had no other name than the American Titian. When Weir mentioned the name of Allston's they exclaimed "that's the man!"

Some agreeable specimens of this eminent artist's happy poetical vein are given.

And as the "Paint King" belongs to our subject, the reader may, if he pleases be amused with this playful ballad in imitation, and in burlesque of Scott's "Fire King," Lewis's "Cloud King," and other sportive effusions much read at that time. It commences as follows:

Fair Ellen was long the delight of the young,
No damsel could with her compare;
Her charms were the theme of the heart and the tongue,
And Bards without number in ecstacies sung,
The beauties of Ellen the fair.

Yet cold was the maid; and though legions advanc'd
All drill'd by Ovidean art,
And languished, and ogled, protested and danced,
Like shadows they came, and like shadows they glanced
From the hard polish'd ice of her heart.

Yet still did the heart of fair Ellen implore
A something that could not be found;
Like a sailor she seem'd on a desolate shore,
With nor house, nor a tree, nor a sound but the roar
Of breakers high dashing around.

From object to object still, still would she veer,
Though nothing, alas, could she find;
Like the moon, without atmosphere, brilliant and clear,
Yet doom'd, like the moon, with no being to cheer
The bright barren waste of her mind.

It is with pain after such agreeable matters, that we feel compelled to advert to the spirit—any thing but gentle or just—in which the name and works of Col. Trumbull are uniformly mentioned in this work; and especially to that passage in the second volume which has called forth the following explanation from Col. Trumbull:

To the Editor of the N. Y. American:

38 BROADWAY, NEW YORK, 9th December, 1834.

MY DEAR SIR—I have been looking over Mr. Dunlap's work on the Arts of Design in America, some pages of which I find he has devoted to a notice of me and my works—written with as much accuracy as could be expected from the mode in which the materials were collected, from the shreds and patches of detached conversations reported to him from memory, and put together with a studied spirit of ill-will. To this I have no objection, nor to the bitterness with which he criticises some of my professional works, for to Artists in particular is applicable the admirable rule given by our Saviour on another occasion, "*By their works ye shall know them.*" The works of Mr. Dunlap and myself will be judged by future and perhaps more impartial judges than we are of each other.

But in his notice of Mr. Durand, vol. 2, page he has contrived to drag me again before his readers,

in a way calculated to leave an impression on their minds that I have lately had the baseness to cause to be engraved on the hilt of a sword—a *falsehood*, to gratify my own vanity. It is due from me to his readers, and to my own character, to take notice of this.

All who have read the history of the War of the Revolution, know that in 1778 a plan was formed for the recovery of Rhode Island from the British, who had taken possession of it at the close of 1776. A French fleet of twelve sail of the line, from the West India station, under command of the Count D'Estaing, was to co-operate with the American force commanded by General Sullivan. This fleet appeared off New York in August, and thence sailed to Rhode Island.

It is true that I had resigned my situation in the Army in the Spring of 1777. But I had not so soon lost my relish for "the glorious pomp and circumstance of war" and therefore I, on this occasion, offered my services to Gen. Sullivan, in the character of a volunteer Aid-de-Camp; my offer was accepted and I accompanied the General in this character. The French fleet was soon drawn off from their co-operation by a manoeuvre of Lord Howe, and our Army alone continued the siege or blockade of Newport until the close of August, when the attempt was abandoned, and our troops retired to Butts Hill, at the north end of the island, near Howland's Ferry. On the following morning, I believe, the 29th August, our rear guard posted on Quaker (otherwise Windmill) Hill was attacked, soon after daylight: and Gen. Sullivan wishing to avoid an action on that ground, sent me with orders to the officer commanding the guard (Col. Wigglesworth) to withdraw. In this affair Col. Tousard lost an arm. Capt. Walker, of Col. Henry Jackson's Regiment, was mortally wounded, and some other loss was sustained: but the Guard was saved; the day passed off in skirmishing; and towards evening the enemy pushed our right wing, so far as to endanger themselves. I was ordered to lead Gen. Lovell's brigade of Massachusetts militia, who formed the right wing of our second line, to aid in repulsing them: they did not wait for us to come in contact, but as we advanced, they retired behind the crown of a hill. I rode forward to reconnoitre, and fell in with a solitary fatigued German soldier, from whom I took the sword in question, and ordered him to the rear, while I rode forward to the crest of the hill to look for the enemy;—they had been repulsed by other troops, and were forming, but vacillating:—I galloped back to Gen. Lovell; but his column, satisfied with the retreat of the enemy, had dispersed without the shadow of order. I had meditated a movement whose success depended upon celerity; and as it would require *time* to reform the column, I gave up my purpose, and we withdrew.

General Lovel is long since dead; but with the talents which he has shown for investigation, Mr. Dunlap may perhaps hunt up some survivors of that day, and ascertain the correctness of this statement.

I am, my dear sir, faithfully yours,

JOHN TRUMBULL.

Nothing can be clearer or more unquestionable than this statement—the substance of which we cannot doubt Mr. Dunlap will feel the justice of incorporating in the next edition of his book.

TALES OF THE BORDER; by James Hall, author of Legends of the West, &c. We gladly welcome this handsome volume by the most successful painter of frontier life that has yet written. We shall take an early opportunity to examine its contents.

CHAMBER'S EDINBURGH JOURNAL. R. J. Pritchaard, 2 Hanover Square, and 45 Ann street.—This is a handsomely printed quarto, containing four numbers of the entertaining original miscellany of the work whose name it bears. The whole for 12 1-2 cents.

DUNLAP'S HISTORY OF THE RISE AND PROGRESS OF THE FINE ARTS.—In our second notice on Saturday, of this attractive work, we took occasion to introduce a letter from *Col. Trumbull*, setting himself right before the public in a transaction adverted to by Mr. Dunlap. We now have the pleasure of subjoining a letter from the latter gentleman expressing his readiness to incorporate the letter of Col. Trumbull, in the next edition of the work:

To the Editor of the New York American:

MONDAY NOON, DEC. 15, 1834.

Dear Sir: I have this moment seen the American of Saturday, in which appears a letter signed John Trumbull, objecting to a passage in my history of the Rise and Progress of the Arts of Design, and giving a narrative of a transaction which explains what had appeared to me a contradiction of a statement I had made in the book.

As in my limited reading I have not found the gentleman's name in any history of our revolution, I must be excused for relying upon a statement which I have supposed came directly from himself for the purpose of publication; and when the date of an inscription was mentioned to me, which appeared to contradict the record of events which I had made on such authority, I could not but think it an error in the date given, and felt myself called upon to show my authority for the dates and facts as I had published them. The narrative which you have given in the American of Saturday perfectly explains the discrepant dates; and it will give me pleasure in a second edition of my work (which from the demand for it in this city and elsewhere will probably soon be called for) to insert the narrative, as now first published, of a transaction so honorable to the gentleman; and by giving it in its proper place and under its proper date, the passage objected to being rendered superfluous and irrelative, will be expunged. I remain yours truly and gratefully.

WM. DUNLAP.

FOREIGN INTELLIGENCE.

LATER FROM EUROPE.—By the *Europe*, packet ship, *Maxwell* Master, of 16th ult., from Liverpool there are London dates of the 15th. Paris 13th, and Madrid of 8th ult.

In England the death of Earl Spencer, father of Lord Althorp, had been the signal of the dissolution of the Ministry—such at least is the import of the two subjoined paragraphs, from different London papers of the 15th:

[*From the London Morning Chronicle Nov.* 15:]

"We have to communicate the astounding intelligence, that Lord Melbourne's Administration has ceased to exist. His Lordship repaired to the King on Thursday, and returned last night to announce to his colleagues the event. His Majesty, we learn, expressed no dissatisfaction with Lord M's. administration, but he let it be understood that he considered it at an end with the death of the late Earl Spencer, and the consequent removal of the present Earl to the House of Lords."

[*From the London Times, Nov.* 15.]

We have no authority for the important statement which follows, but we have reason to believe that it is perfectly true. We give it without any comment or amplification in the words of the communication which reached us at a late hour last night. "The King has taken the opportunity of Lord Spencer's death to turn out the Ministry; and there is every reason to believe that the Duke of Wellington has been sent for. The Queen has done all."

There must at any rate be a new leader in the House of Commons, as Lord Althorp goes up of course to the other House. It does not however seem probable, in the existing state of public opinion in England, that the Duke of Wellington can be charged with the formation of a new Ministry. We should rather incline to the belief that Lord Durham would be able—backed as he seems to be by the popular voice—to force himself and friends upon the King. In that event Lord Brougham would be obliged to retire.

It is stated by the Journal of Commerce, that the Chambers were convened for 1st December, instead of 29th; and it is inferred that this may have been done at the urgent solicitation of our minister at Paris, with a view of carrying into effect the American treaty.

It is somewhat remarkable, that in the new French Cabinet, as set down, there should be two persons nearly connected with America. *M de Bresson* was long resident at Washington as Secretary of Legation, and married a daughter of Mr. Justice *Thompson*, of the Supreme Court of the United States, though he is now a widower.—Gen. *Bernard* was employed for many years by this Government with the rank and pay of a Brigadier General, as an Engineer in constructing the fortifications of the sea coast. On the part of this latter gentleman certainly, and we presume as much of the former, we know the most friendly feelings towards this country to exist; and are quite satisfied, that no efforts will be wanting on his part, compatible with fidelity to his own country, to preserve a good understanding with ours.

ONE O'CLOCK.—Our papers by the Europe are just come to hand, and we find by the Courier of 14th, that the Paris *Moniteur* had published officially the list of the Ministry as given below.

NEW FRENCH MINISTRY.—The new French Ministry is composed almost entirely of fresh materials,—M. Persil being the only member of the Ministry who is retained. It is as follows:

The Duke of Bassano, Minister of the Interior and President of the Council.

M. Teste,	Minister of	Commerce.
Mr. de Bresson,	"	of Foreign Affairs.
Gen. Bernard,	"	of War.
Charles Dupin,	"	of Marine.
M. Passy.	"	of Finance.

It is not supposed that this change of Ministry indicates any change of policy in the affairs of the Government. Its annunciation, however, occasioned a momentary decline of the funds.

LONDON, Nov. 14.—The King of the Belgians opened the session of the Chambers, on Tuesday last, in a Speech, which, like most Speeches from the Throne, deals only in those generalities which cover insignificance of statement with pompous verbiage, and render it impossible to collect from the most careful perusal of its high sounding phrases any definite meaning.

LONDON, Nov. 14.—The French papers of Tuesday bring accounts from Spain of the 5th instant, one day later than our own accounts published yesterday. The Journal des Debats states that a courier, who left Madrid on the 4th instant, brought intelligence that 78 members of the Chambers of Procuradores had declared, in an address to the Queen Regent, that they felt themselves compelled to refuse all support to the Government, if its system were not changed. This step was said to have produced at Madrid a great sensation. General Valdez had been named Minister of War, in place of M. Zarco del Valle. M. Medrano would replace M. Moscoso.

Our Bayonne Correspondent transmits to us a copy of the proclamation of General Mina on entering on his command. He promises pardon and oblivion to the insurgents who should submit, but declares a war of extermination against the contumacious. Some disturbances had taken place in Catalonia. On other points the Carlists were displaying renewed activity.

BAYONNE, Nov. 5.—Gen. Mina entered Pampeluna on Thursday the 30th ult. at 7 o'clock in the evening, but did not make his arrival known until the 1st inst. The General thought proper to repair thither *incog.*, in order to avoid the feasts which the inhabitants were preparing for him, and took up his residence in a private house, of the town, to the great mortification of the ladies of Pampeluna, who had handsomely furnished the *Palaise* for his reception.

It is now clearly understood that no call for French assistance has been made nor will be. You may depend on what I say, though I have no doubt many letters from this will contradict me on the subject.

The Monitor of Thursday, received by express with other papers, contains the following:—"The following telegraphic despatch dated Madrid 8th addressed by the French Ambassador in that capital to the Minister of Foreign Affairs, was received by the government yesterday."

"The Chamber of Procuradores have adopted the amendments made by the other Chamber in the Foreign Debt Bill. Thus the Guebhard Loan is acknowledged."

Negotiations for the marriage of the Queen of Portugal to the Duke of Leuchtenberg go on prosperously.

The foreign news of yesterday must be looked on as of more than usual importance. Hence we have gone through the papers with care, and present the result, as we collect it.

With regard to the English ministry, the speculations of the London press are, that Lord Melbourne will still remain Premier, that Mr. Spring Rice *as*

Chancellor of the Exchequer, and Mr. Abercrombie, as one of the Secretaries, will lead in the House of Commons, that Lord Spencer will probably go to the Admiralty, and Lord Mulgrave to the Colonial Department. Such an arrangement would leave nothing to hope for Lord Durham and his friends, and nothing to fear for Lord Brougham.

As to the French Cabinet, it is as mentioned yesterday. In addition, *Gen. Bernard* is to be created Peer of France, and discharge *ad interim* the duties of foreign as well as war Minister, until *M. de Bresson* can return from Berlin, where he is Minister.

M. Teste, in addition to the ministry of Commerce, is to be *ad interim* Minister of Public Instruction. The Chambers were certainly to meet on the 1st instant.

In Spain civilization seems retrogading. The Councils of the Queen are inefficient and distracted, while the civil war is carried on in a spirit that disgraces the era and the name of man. Allusion was made in our extracts yesterday, to *Zumalacarregay's* success over *Gen. O'Doyle*, which caused the dismissal at once at Madrid of the Minister of War, *Zarco del Valle*. The authorities at Madrid published an account of it, representing it as a mere skirmish of little importance. We subjoin *Zumalacarregay's* account, giving a quite different aspect to the affair. The cool brutality with which this Carlist Chieftain records the shooting in cold blood of *Gen. O'Doyle*, and the humanity which only gives quarter when "tired of killing," present in striking relief the nature of this contest.

From the same respecting the action of the 28th, near Vittoria.

"Dear Friend Echeveria—I beg you will place in the hands of his Majesty the accompanying. I have not time to write all I could wish, and on that account I do not forward the official details. The Marquis de Valdespina has not left my side during the two glorious actions, and Zavalia was with the advance, executing my orders.

"To-day the noted O'Doyle, his brother the Captain, and other officers were shot. The field of battle presents a horrid sight. The number of prisoners is very great. To-morrow, according to the orders which I receive here, I shall be able to manage the interview with his Majesty. Adieu, &c.

(Signed) "Thomas Zumalacarreguy.

"*October* 28, 1834.

"To Don Jean Echeveria, *President of the Governing Junta of Navarre.*

"P. S. Tired with killing, I ordered quarters to be given to the prisoners."

(Enclosure to his Majesty.)]

"*Heredia, 7 o'clock at Night, Oct.* 28, 1834.

"Sire:—The God of Armies has granted two consecutive days of glory to the arms of your Majesty. Yesterday the revolutionary forces, commanded by O'Doyle, were destroyed. This rebel fell into our hands, also, two field-pieces, a stand of regimental colours, and more than 400 prisoners. The number of the killed was horrid, as it exceeded 500.

"To-day being occupied in the reduction of some fugitives who fled away from the action of yesterday, and had taken refuge in the town of Arieta, a strong column made its appearance, proceeding from Vittoria, and commanded by the traitor Osma. Being gallantly attacked by our brave men it was driven back with great loss, as the number of killed exceeds 500, and the prisoners 450. Your Majesty's troops followed the enemy close to Vittoria.

"This occupation, Sire, has been the cause of my not proceeding to visit your Majesty, as I had offered to do, and to-morrow, most probably, I shall again be deprived of this honour, owing to its being necessary for me to observe the column of the rebel Oraa, and of which, at this moment, I know nothing.

"At your Majesty's royal feet, &c,

"Thomas Zumalacarreguy."

SUMMARY.

The Nineteenth Century.—We have seven or eight communications on our table from different correspondents, rebelling against Professor Kemp's decision by authority, as to the proper century in which 1st January 1800 is to be classed. As, however, the discusion can in no wise affect the fact, and is not likely now,—any more than at the period in question, when it was long and warmly conducted,—to settle opinion in relation to it, and as moreover current affairs make such a demand upon our columns, as to embarrass us daily in the choice of what to insert and what to omit,—we must postpone to the commencement of the next century, the discussion of the question, when it does in truth begin.

Hamilton's Monument.—For several days past a number of men have been employed in raising a granite pillar in the ground area of the Merchants Exchange, the head of which perforates the floor of the great room above. This work is to sustain a full lenth Statue of Gen. Hamilton, procured by an association of gentlemen, who several years ago subscribed between four and five thousand dollars for this purpose. The Statue is of pure white marble from under the chisel of our fellow citizen Ball Hughes. It is to stand upon a pedestal of blue granite, rising above the floor about six feet.—[Jour. of Com.]

Real Estate at Jamaica.—The great growth of this city and Brooklyn, is felt in its effects upon the value of property in neighboring villages, and in none more than in Jamaica, with which a railroad to connect it with Brooklyn, is in progress, to be finished in the course of the next summer.

The Eclipse.—I observed the last Solar Eclipse at one of the principal stations of the Coast Survey, upon Westhills, Huntington township, Long Island, in latitude 40 deg. 48′ 47″ 1-8 by the observations made there, and in longitude 4h. 53m. 52s., 7 West of Greenwich, as given by the preliminary calculations of the C. S. triangulation from New York.

The mean time was, 1834, Nov. 30th, at 1h. 09m. 53s., 44 beginning; and at 3h. 45m. 18s., 55 the end.

F. R. Hassler.

The Steamboat *William Gibbons*, arirved last night, bringing us Charleston papers of Saturday afternoon. They confirm the agreeable intelligence communicated by the National Intelligencer, of a complete reconciliation between the *Nullifiers and Union men* of that State.

Landlords and Legislators.—The Richmond Whig states that the landlords residing at the seat of Government of Missouri having combined to charge five dollars per week board, resolutions were introduced in both Houses, for changing the place of holding the Session in order to escape the imposition! In the Senate, the proposition was negatived 16 to 12. In the House, it was debated from time to time, and skilfully brandished over the heads of the landlords, until the latter, thoroughly alarmed, reduced board to four dollars per week.

The Ship Nashville, from this port, arrived at New Orleans on the 29th ultimo. The Rev. Mr. Parker, who was a passenger, was landed about twelve miles below the city. Letters mention that a carriage had been sent to convey him to the city. This is the gentleman whose sermons at the North, descriptive of the state of society in New Orleans, have been so misrepresented, as to occasion much excitement against him in New Orleans.

Official.—The Government has been officially informed, that the American schooner Mexicana, Graham, had arrived at Bahamas, from Castle Island, having been got off by the wreckers, with an augur hole found bored in her botton.

New Orleans, Nov. 26th.—Ice was formed here last night. This fact in itself, is not to be regretted but should a spell of warm weather come before the Sugar Planters shall have finished grinding, the cane will sour, and several thousand hogsheads will have to be deducted from the sum total of this year's crop.

It is believed that within the last sixty days, a sum little less than five millions of dollars has been paid for Cotton in this city. Half a million of this money has probably been appropriated towards paying the people of New Orleans, for their trouble in one shape or other.

In speaking of the inauguration at New-Orleans of the *plaster cast* of a bust of Napoleon, the New-Orleans Advertiser says:—"The farce was amusing, if not imposing, and we must be contented to know that we have played the fool in a manner that could not be equalled, and would not, perhaps, be attempted in any other city in the Union."

The ship Ninus has sailed from Norfolk, with 126 manumitted slaves, to make a settlement at Bassa Cove, Africa, under the patronage of the Young Men's Colonization Society of Pennsylvania. The Colony is to be called *Penn Sylvan*. It is intended that another expedition shall be sent within three months, of manumitted slaves from Georgia.

Loss of the Packet ship Jupiter.—*From Africa.*—The brig Ruth, Taylor, from the West Coast of Africa, arrived yesterday at Philadelphia. In this vessel came passengers, John Hanson, Esq. and Capt. A. S. Hussy; and the crew of the ship Jupiter: a colored man, belonging to Maryland, one of the emigrants to Cape Palmas, was drowned on the 7th of October last, coming out Bassa Bar. He was on his way to his family.

Since the above was in type we have been favored with several letters from Monrovia detailing the particulars of the loss of the packet ship Jupiter, Captain Knapp.

The Jupiter sailed from New York for Liberia, in June, with passengers for the Colony. She had a fine run of 27 days to the Cape de Verd Islands, and met with no accident except the loss of one of the seamen, who fell from a spar. From the Cape de Verds they had light winds to the coast of Africa, and arrived at Monrovia on the last day of July, and on the first of August all the passengere were safely landed. They immediately proceeded to the government house, where a hymn was sung, composed by Dr. Skinner, one of the passengers.

The letter adds, "that out of all the passengers that went out by the Jupiter on the former voyage, Miss Farrington is the only one that survived; that lady was in good health.

The following is an extract of a letter from the supercargo, written at Monrovia (without date.)

"After landing our freight and passengers we proceeded to windward as far as Manna river. We had a tremendous storm on the nights of the 14th and 15th. We were obliged to let go our two best anchors, with 70 to 90 fathoms of chain, veered away on each. On the morning of the 15th, we dropt the stream anchor, the vessel still drifting, every sea making a breach over, when at 3 o'clock, she struck, with a tremendous crash, and carried away her rudder. In fifteen minutes she again struck, at which time we were holding on to the main chains, with the expectation that the mast would go by the board.

We stove the water casks on deck to make her strike easier, and cut the stream cable to let her drift as near shore as possible, but she continued to strike at intervals till daylight—every moment expecting to be our last. At this period we found ourselves but a short distance from shore, and in the course of the day effected a landing with some clothing and provisions, but the natives stole both from us. After enduring much from hunger, thirst and fatigue, we arrived here on the 30th August, where we have suffered from fever, of which Mr. Kyon, the first officer, and one seaman, have died."

The Jupiter and her cargo are insured.—[Commercial.]

The Great Wall of China.—Even when united under one emperor, China trembled at the Tartars of the desert. About two centuries before the birth of Christ, She-hwang-te (the book burner) construc. the great wall of China, to prevent their incursions. This wall, which has always been considered one of the world's wonders, is fifteen hundred miles in length, of great height and thickness, furnished with fortresses and towers innumerable, and is carried with singular skill over mountains and rivers, as well as across the plains and valleys. Lord Maccartney exclaimed on seeing it, that it was certainly the most stupendous work of human hands, and he rationally concluded that, at the remote period of its building, China must have been a very powerful and civilized empire. Dr. Johnson was accustomed to say of it, that it would be an honor to any man to say that his grandfather had seen the great wall of China. Mr. Barrow, who saw it with Lord Macartney, went into some amusing calculations as to the quantity of the materials it contains. According to his account, all the matirils of all the dwelling houses of England and Scotland, supposing then at that period (at the and of the last century) to amount to 1,800,000, and to average 2,000 cubic feet of brick work or masonry, would be barely equivalent to the bulk of the wall, without taking in its forti esses and towers, which he calculated contained as much masonry and brick-work as all London did at that time. Stupendous as was the work, it failed in its object.

ARRIVAL OF THE SHIP UNITED STATES.—The United States frigate United States, Captain Ballard, arrived on Wednesday, 10th, from the Mediterranean, having sailed from Mahon on the 26th October, and passed the rock of Gibraltar on the 28th.—Left at Mahon the Delaware 74, Captain Nicholson, and United States schooner Shark, all well. The John Adams sailed for Marseilles on the 22d of October. The cholera had much subsided at Mahon when the United States left.

The United States frigate *United States* has come up, and we annex a corrected list of her officers.

The *United States* beat in over the bar off Sandy Hook at two-thirds flood tide, making eleven tacks, and drawing at the time 22 feet 10 inches water.—This certainly does not look as though this harbor were, as it has been the aim in some quarters to represent it, inaccessible to ships of war of the largest class.

OFFICERS OF THE UNITED STATES.

Commander—H. E. Ballard Esq.

Lieutenants—F. Buchannan, G. A. Magruder, T. O. Selfridge, A. K. Long, and S. S. Lee.

Surgeon—S. Rapalje.

Purser—J. N. Todd.

Sailing Master—F. W. Moores. *Second Master*—T. A. Hunt. *Chaplain*—C. S. Stewart. *Assistant Surgeon*—J. C. Spencer. *Passed Midshipmen*—William A. Wurts, Alberto Griffiths, Oliver S. Glisson, John J. Glasson. *Midshipmen*—C. Richardson, R. D. M'Donald, M. S. Pitcher, R. Bache, A. F. V. Gray, D. D. Porter, R. L. Tilgham, W. S. Williamson. J. L. Hesp, A. M'Lane, W. B. Beverly, D. Lynch, J. M. Frailey, J. Contee, T. W. Magruder, T. W. Cumming, M. Donaldson. *Boatswain*—G. Blanchard. *Sailmaker*—J. Beggs. *Carpenter*—P. H. Dee. *Gunner*—S. G. City. *Officers of Marines*—B. Macomber, Captain; T. W. Young, 2d Lieutenant.

Passengers—W. E. McKenney, E. Ridgeway, W. G. Woolsey and J. L. Lardner, Lieutenants. S. T. Gillet, Passed Midshipman. E. C. Kennedy, Midshipman.

[From the Courier and Enquirer.]

To the Right Reverend and Reverend the Clergy of the City of New York:—

REVEREND SIRS,—By the returns of the last year it appears, above twenty-four thousand persons received alams in this city during the winter. Such return is independent of the vast numbers to which a truly benevolent and Christian sympathy afforded relief in private.

I shall not offer the incense of praise to those actuated by principles, which amply repay the feeling heart, engaged in such Heavenly acts of mercy. But, Reverend Sirs, I humbly and respectfully venture to address you, that this active stream of benevolence which runs down our streets, may be so directed as not to cherish vice, promote idleness and profligacy, and generate the very misery which calls it forth.

My humble suggestion is, that while all cases of distress shall be enquired into and relieved; yet in doing so, that the objects of such sympathy may be raised from their dependent state, and that in the dispensation of aid, idleness and vice shall not be generated but repressed. Without further preface, I beg leave to submit for consideration, that each Church or Congregation in this city, shall nominate two of their party to attend at a meeting on——— evening next, the——instant, at——, to take into consideration the following measures, or such others as in their united wisdom should seem calculated to obtain the end in view.

1st. That the Commissioners of the Alms House be requested to take a share in the direction of the proposed measure, and to furnish a clerk and apartment at their office, in the Park, to which all communications shall be directed, for the peculiar duties of the object in view.

2d That all persons addressing letters, petitions or applying for relief, those appiled to should forward such applications with the name of the persons seeking aid, the number of their residence, &c. to the clerk, at the Alms House—by whom such applications shall be forwarded to the visitors of the district in which the applicant resides; as also to the congregation of which the applicant is a member.

3d That each church or congregation shall appoint a number of their members to the peculiar duties of visiting the distressed, and those in want, so that two, at least, shall be at all times prepared to attend on the Lord's day, from two to five o'clock, and on Wednesdays, from four to six o'clock, upon being notified so to do, by the clerk of the institution.

4th That every yearly suberiber of one dollar and upwards shall have the liberty of returning to the office the name and residence of any person they deem an object of distress, as well as of all who may apply to them for aid.

5th That a weekly statement shall be made of the cases of distress, a statistical account kept of the causes which led to it; the denomination to which the applicants belong notified, so that permanent aid may be afforded—avoiding however, all exposures not necessarily called forth.

9th That all cases of imposition and profligacy shall be published, describing the person so accurately as to check imposition.

Expected consequences.—That the evils arising from vagrancy, among which the greatest are the demoralization of the children, would be checked, those exhibitions of wretchedness and distress rendered useless, which are adopted to excite compassion—while at the same time every benevolent character would have the consolation to know that those who applied to them would be relieved, if worthy of it, and that by their causing enquiry to be made, they were not turning aside from the poor, but from the hypocrite and imposter, the promoters of crime and infamy.

The visiting on Sunday would enable the visiters to form a correct estimate of the persons they visited, and serve as a check on dissipation; would tend to preserve the youth from a total disregard to religion; would afford an excellent opportunity of giving advice as to the children, and in various ways prove salutary to the family,

The various denominations are invited, in the hope that benevolence and real Christian principles will actuate all in a work of this nature, and not a spirit in any way sectarian, to mar that charity which is the most striking feature of general christianity.

The editors of the several papers and publications in this city, are requested to give place to the foregoing, with a view to any further suggestions and a full examination of a most important subject.

Prof. Vethake has been elected President of Washington College, Va. We do not know whether he will accept the station.

Census of Michigan.—Acting Governor MASON transmitted a special message to the legislative council of Michigan on the 18th ult., communicating, for the information of that body, the result of the census of the territory, taken in conformity with an act of the council, so far as returns had been received. No returns had come in at that date, from the counties west of Lake Michigan; but those from the peninsula alone, exhibited a result so far beyond the number required to entitle the territory to admission into the Union, under the ordinance of 1787 (60,000,) that the Governor conceived it unnecessary to delay urging upon the council preliminary measures necessary for the formation of a state constitution. With this view, he recommends the calling of a convention, at an early day; and as a further preliminary step, that a memorial be sent to Congress, to set off a separate and distinct territorial government for the country lying West of Lake Michigan, and now included in the territory, which he represents as desired by the citizens of that section.

It appears from the message, that the population of the peninsula alone, amounts to 85,856. By the census of June, 1830, taken under the authority of the United States, the number of inhabitants in the peninsula was about 28,000; and in the whole territory 31,689—showing more than a three-fold increase in about four years.

Application has already been made to Congress for the admission of Michigan into the Union, and the case is among the unfinished business of the las session.

The city of New Orleans has been presented with a bust of Napeleon, by *Dr. Antomarchi*, one of the medical attendants of the deceased Emperor, which seems to have thrown the Common Council into ecstacy. According to the *New-Orleans Courier* of 22d November, the Clergy, the Mayor and Corporation, the Governor, the Judges, Officers, &c. &c were to meet on *Sunday, the 23d!* at the City Hall. in order to receive with all honor the aforesaid bust and its donor! We wonder whether Marseilles or Bordeaux would thus turn out to receive a bust of Washington.

Total Eclipse of the Sun.

MILLEDGEVILLE, (Geo.) Dec. 2.

The Solar Eclipse.—Having a perfectly clear sky last Sunday, we, at Milledgeville, in common with all others we presume in the track of the total obscuration, had the full enjoyment of that sublime phenonenon. Nor was the rare occasion lost to science. Mr. Nicollet, a distinguished Astronomer from Paris, now on a scientific tour through the United States, took this place on his way to the West; and was assisted by Drs. Dugas and Ford, of the Medical College of Georgia. Being well provided with appropriate instruments, we doubt not, their observations were accurate and satisfactory, and will probably tend to advance several branches of science. Among which, one thing, interesting to the State, we presume will be, the exact ascertainment of the latitude and longitude of its capital.—This, and any other results that we may be able to procure, we shall of course be happy to communicate to our readers.

We were prepared for a magnificent spectacle, but the event outwent our anticipations. With thousands of others, we watched the instant when the last beam was shut out, rendering the planetary motion *visible*. Then ensued an interval of more than a minute, of indescribably awful grandeur. A pall of funeral black drawn over the sun, whose effulgence still broke off around it; and then the first gush of light as it opened out to us for that little instant, while the naked eye not yet overpowered, could still be fixed on the whole orb of the moving moon. The universal twilight, the appearance of the stars, the rosy hue like morning, all around the horizon, the sudden chill of temperature, showed for the only time in most lives, how it would be, if the sun should be stricken out in mid-day. It was a spectacle that terrified the savage, and astonished the vulgar eye. It elevated and strengthened all human conception of omnipotent power, and showed forth, in the wonderful accuracy, even to a second, of the astronomical predictions of the event, another of the triumphs of that grandest and most exact of the sciences.

The line of total occulation, seventy miles wide or more, coming from the Pacific and crossing our western wilds, and the back parts of Mississippi and Alabama, took through the central region of Georgia, and thence to the Atlantic Ocean. Being visible in no part of Eupope: Georgia, and a small corner of South Carolina, was the only part of the globe at all favorable to observation; and we are rejoiced to learn that the opportunity has not been neglected. We hear of gentlemen from distant places, at Beadfort and at Ebenezer, near Savannah, and probably at other points, whose simultaneous labors will tend to correct or to corroberate each other.

P. S. Having called on Mr. Nicollet, he kindly furnished us with such of the results, interresting to this section of the country, as could be made out, without detailed and protracted calculation. They will be found below.

Mr N. took occasion to remark on the great merit of Pain's American Almanac; the astronomical records of which, he says, are not surpassed in accuracy by the celebrated Ephemerides of England, of France, or of Germany.

ASTRONICAL OBSERVATIONS.

Of the Total Eclipse of the Sun, made the 30th Nov. 1834 at the State House, Milledgeville, Geo.

	H.	M.	S.	
Beginning of the Eclipse,	0	15	28	Mean time at the State house
Beginning of total darkness,	1	24	53	
End of total darkness,	1	44	08	
End of the Eclipse,	3	5	42	

A difference will be perceived between these calculations, and those set down in Paine's American Almanac; but the latitude and longitude of the capital of Georgia, now ascertained, could not be accurately known to that gentleman. The Almanac is correct according to the best data then extant.—[Journal.]

BROOKVILLE, IND., Nov. 29th.—*Hogs!!*—For the last three weeks our eyes have been greeted with scarce any thing except *vast droves* of the *swinish multitude*. Within that time, "from our own idea of things," and from the calculations of others there must have passed thro' this place, upwards of THIRTY THOUSAND HOGS; all wending their way to Cincinnati, the greatest hog market, we would venture to say in the known world. All these hogs are from a small section of this State. We are told by the oldest settlers,—there never was as many hogs drove through this place in one year, before, as has been within the last three weeks. Some days it seemed as if the vast arena of nature's store house was filled with Hogs.—[American.]

23d CONGRESS—Second Session.

Tuesday, Dec. 11—IN SENATE.

In pursuance of the resolution passed yesterday, the Senate proceeded to ballot for its Standing Committees; and the ballots resulted in the choice of the following gentlemen, to serve for the present session.

Foreign Relations—Mr. Clay, Chairman; Messrs. King, of Georgia, Mangum, Sprague, Tallmadge.

Committee on Finance—Mr. Webster, Chairman; Messrs. Wright, Tyler, Mangum, Ewing.

Committee on Commerce—Mr. Silsbee, Chairman: Messrs. King, of Alabama, Waggaman Sprague, Wright.

Committee on Manufactures—Mr. Frelinghuysen, Chairman; Messrs. Morris, Knight Prentiss, Tyler.

Committee on Agriculture—Mr. Brown, Chairman; Messrs. Kent, Swift, Robinson, Morris.

Committee on Military Affairs—Mr. Benton, Chairman; Messrs. Tipton, Preston, King, of Alabama, Clayton.

Committee on Militia—Mr. Robinson Chairman; Messrs. Hendricks, M'Kean, Waggaman, Swift.

Committee on Naval Affairs—Mr. Southard, Chairman; Messrs. Robbins, Tallmadge, Bibb, Black.

Committee on Public Lands—[The Committee on Public Lands of the last session was continued for the present session, by a unanimous vote passed during the last week. The members consist of Messrs. Poindexter, (Chairman,) Moore, Prentiss McKean, and Clay]

Committee on Private Land Claims—Mr. Black, Chairman; Messrs. Kane, Naudain. Porter, Shepley.

Committee on Indian Affairs—Mr. White, Chairman; Messrs. Tipton, Smith, Swift, Frelinghuysen.

Committee on Claims—Mr. Bell, Chairman; Messrs. Tipton, Naudain, Brown, Shepley,

Committee on the Judiciary—Mr. Clayton, Chairman; Messrs. Preston, Bell, Smith. Leigh.

Committee on the Post Office and Post Roads.—[The Committee on the Post Office and Post Roads of the last session was continued for the present session, by a resolution passed unanimously, during the last week. The members consist of Messrs. Grundy, (Chairman) Ewing, Robinson, Knight, Southard.]

Committee on Pensions.—Mr. Tomlinson, Chairman; Messrs. Tallmadge, McKean, Prentiss, Preston.

Committee on Roads and Canals.—Mr. Hendricks, Chairman; Messrs. Kent, Robinson, Robbins, McKean.

Committee on the District of Columbia.—Mr. Tyler, Chairman; Messrs. Kent, Bibb, Southard, Tomlinson.

Committee on Revolutionary Claims.—Mr. Moore, Chairman; Messrs. Smith, White, Leigh. Freelinghuysen.

Committee to Credit and Report the Contingent Expenses of the Senate.—Mr. Knight, Chairman; Messrs. Tomlinson, Morris.

Committee on Engrossed Bills.—M. Shepley, Chairman; Messrs. Robinson, Morris.

HOUSE OF REPRESENTATIVES.

[On Monday last, the following gentlemen were announced as the Select Committee appointed to reorganize the Treasury Department: Messrs. Wayne, Mason, of Virginia, McKennan, Cambreleng, Rencher, Evans, Pope, Jarvis, McKay.

And on Tuesday last, the following gentlemen were announced as the Select Committee on the part of this House on the Death of Lafayette: Messrs. Hubbard, Lincoln, White, Allen, of Virginia, Marshall.

On the same day, the following gentlemen were announced as the Committee on the Destruction of the Treasury Building: Messrs. Gilmer, Archer, Binney, Beardsley, Gorham, Johnson, of Kentucky, Speight, Hubbard, Carr.

Numerous petitions, memorials, and resolutions, were laid before the House: among the former, one from *J. N. Reynolds*, praying that an expedition may be fitted out for surveying the reefs and islands in the Pacific and on the North-West Coast.

To show the importance of the object in view, Mr. Pearce stated thet there were now engaged in the whale fishery 132,000 tons of shipping, that there were employed 10,000 seamen, and that the business, direct and indirect, employed 170,000 tons of shipping, and more than 12,000 seamen; that more than one-tenth part of our whole navigation was engaged in it, and the capital invested was $12,000,000. He further stated that the annual loss of property, upon the islands and reefs not laid down upon any chart, was fully equal to the expense of the expedition and survey requested.

[*From the Boston Literary Magazine.*]

SUNSET ON THE ALLEGHANY.

I was a pensive pilgrim, at the foot
Of the crowned Alleghany,—when he wrapt
His purple mantle gloriously around,
And took the homage of the princely hills,
And ancient forests,—as they bowed them down,
Each in his order of nobility.
And then, in glorious pomp, the sun retired
Behind the solemn shadow, and his train
Of crimson, and of azure, and of gold,
Went floating up the zenith, tint on tint,
And ray on ray,—till all the concave caught
His parting benediction.

But the glow
Faded to twilight, and dim twilight sank
In deeper shade;—and there that mountain stood
In awful state, like dread ambassador
'Twixt earth and heaven. Methought, it frowned severe
Upon the world beneath, and lifted up
The accuser's forehead sternly toward the sky,
To witness 'gainst its sins. And is it meet
For thee,—thou raised on cloud-capped pinnacle,
To scorn thine own original, the dust,
That sometimes eddying on the angry winds
Doth sweep thy base!

Say,—is it meet for thee,
Hiding thyself in mystery, to impeach
This nether sphere,—from whence thy rocky root
Draws strength and nutriment?

But lo! a star,
The first fair herald of advancing night,
Doth peer above thy summit,—as some babe
Might gaze with brow of timid innocence
Over a giant's shoulder. Hail, lone star!
Thou friendly watcher o'er an erring world,
Thine uncondemning glance, doth aptly teach
Of that untiring mercy which vouchsafes
Thee light, and man, salvation. Not to mark
And treasure up his follies, or recount
Their secret record in the court of heaven,
Thou com'st. Methinks, thy tenderness would shroud,
With trembling mantle, his infirmities,
The purest natures are most pitiful;
But they who feel corruption strong within,
To launch their darts most fiercely at the trace
Of their own image in another's breast.
Thus the wild bull, that in some mirror spies
His own mad visage, furiously destroys
The frail reflector. But thou, stainless star,
Shalt stand a watchman, on Creation's walls,
While race on race their little round shall mark,
And slumber in the tomb. Still point to all
Who through this evening scene may wander on,
And, from yon mountain's proud magnificence,
Turn to thy milder beauty,—point to all,
The eternal love that nightly sends thee forth,
A silent teacher of its sacred lore. L. H. S.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

J31 6t

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13 1 y

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 23 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, pag 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ½ inch, 200 do. 1½ do. ¾ do. 40 do. 1¼ do. ¾ do. 900 do. 2 do. ¾ do. 800 do. 2½ do. ¾ do. soon expected.

Flat Bars in lengths of 14 to 15 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2⅞, 2¾, 2½, 2, 3½, 3¼, and 3¼ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment. A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Leveling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes. WM. J. YOUNG,

Mathematical Instrument Maker, No. 2 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Phila'd.
Germant. and Norris. Railroad,

m1 1y

THE HISTORY OF LIFE.—By B. Cornwall

Day dawn'd. Within a curtain'd room
Fill'd to faintness with perfume,
A lady lay at point of doom.

Day clos'd. A child had seen the light,
But for the lady, fair and bright,
She rested in undreaming night!

Springs came. The lady's grave was green,
And near it oftentimes was seen,
A gentle boy, with thoughtless mein.

Years fled. He wore a manly face,
And struggled in the world's rough race,
And won at last a lofty place.

And then, he died! Behold before ye.
Humanity's brief sum, and story,
Life, Death, and all that is of—Glory.

Feminine Deception.—M. de Balzac, one of the most popular of French modern writers, has made some observations upon the fair sex in his new work of "Feragus, Chief of the Devoraus:"

"There are very few women who have not been, once in their lives, exposed to an interrogatory precise, short and cutting; one of those questions made without commiseration by their husbands, the dread of which alone causes a cold shaking fit, and the first word of which strikes the heart like the point of a poniard. From thence the axiom, *Every woman lies*—an officious lie, a venal lie, a sublime lie; a horrible lie; but obliged to lie. This obligation, then, once admitted, is it not essential to lie skilfully? The women, therefore, in France are admirable liars; our manners teach them deceit so well! In short, woman is so ingenuously impatient, so pretty, so graceful, so true in lying, she avows so well its utility to avoid in social life the violent shocks which domestic happiness would not resist, that it is as necessary as the cotton in which they place their pearls. Lying, therefore, becomes the foundation of their language, and truth is nothing more than an exception; they tell it, as they are virtuous, from caprice or speculation; according to their dispositions or tempers, some women laugh in lying, others weep or become serious; some are angry. After having begun in life by feigned insensibility for the homage which delighted them the most, they often end by lying to themselves. Who has not admired their appearance of superiority, when they trembled for the mysterious treasures of their loves? Who has not studied their ease, their facility, their freedom of understanding, under the greatest embarrassments of life? Then, with them, nothing is borrowed; deceit flows as the snow falls from the skies. With what art, too, do they discover the truth in others—with what cunning do they employ the right logic, regarding the point in discussion, which always acquires for them some secret of the heart from a man, open enough to proceed with them by interrogation. To question a woman, is it not to give ourselves up to her? Will she not always learn what we wish to hide from her? and in conversing with us, will she not conceal whatever she chooses to keep secret? And yet some men pretend to cope with the women of Paris; with women who can put themselves above the stabs of a poniard, by saying, You are very inquisitive; what does it matter to you? Why do you wish to know it? Ah! you are jealous! and if I did not choose to answer you? In short, with a woman who possesses a hundred thousand different ways of saying No, and innumerable variations for saying Yes."

Opium Trade.—By occasionally visiting the Hercules, one of the receiving ships for opium, I was able to observe, through the kindness of Mr. Parry, her chief officer, how this extensive and lucrative business is conducted. The sales are effected in Canton by the European merchant, and orders sent down with the smuggling boats for the delivery of the opium from the different ships; the boats engaged in this occupation are armed with spears, shields, and even fire-arms, to repel any attack that may be made upon them by the Mandarin guard-boats. They are also manned by a very brave and athletic crew; indeed, Chinese fight very well one against the other, but cannot bring forward sufficient courage to face Europeans, except the advantages are overpowering on their side. These boats are provided with sails, in addition to a number of oars and rowers, and they pass through the water with inconceivable rapidity. The Mandarin boats, having a weaker and less choice crew, can seldom or ever overtake them; this, however, may in part be explained from the fact of the guard-boats, (the revenue-cutters,) sent by the Chinese government to cruize against smugglers, coming alongside for a supply of the prohibited drug, to smuggle it themselves into the heart of the Chinese empire. Any thing can be done by bribery in this country, and these boats are often employed for smuggling cassia, treasure, &c. on board European ships at Lintin, &c.; indeed, every smuggling boat that takes opium from an opium ship leaves a payment of one dollar on each chest for the Mandarins, and on the opium returns being made up, the sum is regularly paid to them: each boat leaves also a kum, shaw, or present for the ship, of five dollars. The chests of the drug are opened on board; the balls or cakes are taken out, and immediately deposited in small mat bags, brought by them for the purpose, and sown up; being in that way more convenient to smuggle than in large heavy chests.—There are three kinds of opium usually sold in the English ships, the Malwa, Benares, and Patna; a fourth, the Turkey opium, is confined to American and other foreign vessels. The Patna opium is in balls, packed in partitioned cases, each chest containing forty balls. Old opium fetches a higher price than new; the former being solid, the latter soft and more liable to run. The old chests, so termed, are usually two years old when they come under that denomination. The Malwa opium is in rather flattened cakes. The prices of this drug of course fluctuate very much; the consumption in the Chinese empire must be enormous, and is entirely (not the least extraordinary part of the affair) carried on by an illicit trade. The payments are usually made, if to any extent, in Sycee silver, which is taken by weight, no silver coinage being acknowledged by the Chinese government. The Chinese purchasers of the opium refine it by boiling, previous to using it for smoking; they use it also in the form of tincture, usually carrying a small bottle containing it about them. The present Emperor of China has been described as being totally incapacitated from any business, through the excess to which he has carried the debilitating practice of opium smoking. —[Bennett's Wandering.]

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.60—Semi-Weekly, at $4.00 in advance.

The American Railroad Journal, Weekly, at $3.00 per annum.

The Mechanics' Magazine, two volumes a year, at $3.00 per annum.

The Quarterly Journal of Agriculture and Mechanics, at $5.00 per annum, or $1.25 per number.

The Family Magazine, 416 pages a year, at $1.50 in advance.

The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at $1.00 in advance, now in the 5th volume, bound volumes $1.25

The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

n6v6 Ctf.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.

The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures here after, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

Also—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

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347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications to wit:—New York Farmer and American Gardener's Magazine; Mechanics' Magazine and Register of Inventions and Improvements; American Railroad Journal and Advocate of Internal Improvements; and the New-York American, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany.* tf

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring farther information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroad

No. 264 Elizabeth street, near Bleecker street,

New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J25 tf

RAILROAD CAR WHEELS AND BOXES,

AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit; five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

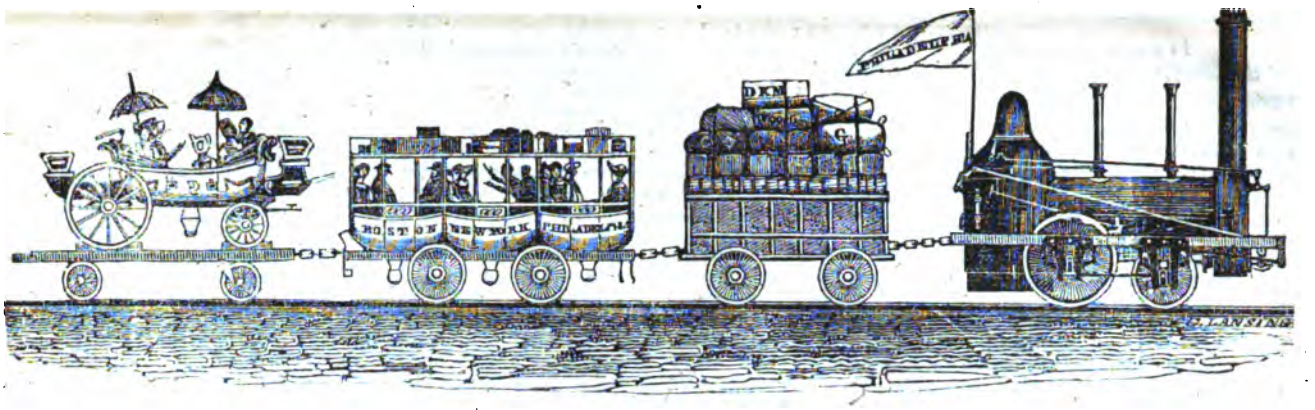
These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.
Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m18



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, DECEMBER 27, 1834. [VOLUME III.—No. 51.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, DECEMBER 27, 1834.

Wm. M. C. upon Undulating Railways, is received, for which he will please accept our thanks. It will find an early insertion.

The communication of W. L., upon Suspension Bridges, is received, and will be attended to as soon as we get through with the long documents on hand. He will, we trust, continue them.

The proceedings of the New-York and Erie Railroad Convention, held at Bath on the 17th inst., have not reached us yet. We were in hopes to have received them in time for this number.

In this number will be found the report of a select committee of the New-York Legislature at its last session, and an interesting letter from Judge Wright, upon the subject of an *enlarged* or steamboat canal, from Lake Ontario to Utica, and of course to the Hudson river.

We continue this week our extracts from the Edinburgh Quarterly Review, upon the utility and importance of Railroads. It contains much of the right kind of information, and it is given in such a manner as to convince those who take the trouble to read it; and it should therefore be extensively circulated in the interior of this State, especially in the vicinity of the route of the New-York and Erie Railroad.

It shows conclusively the great advantages of a Railroad to a *grazing* country; and emphatically such will the southern part of the State of New-York become, when there shall be an easy and speedy access to market.

It may not be generally known, yet from this article it will be readily perceived, that the supply of MEATS, as well as of butter and milk, will be of a much better quality, when transported on a railroad, than in any other way; so with vegetables; and at the same time the supply will be much more abundant and consequently cheaper. To this city, then, as well on account of the comfort and health of its inhabitants, as for their pecuniary interest, is this railroad of great importance; and to our citizens does it especially commend itself.

From the Lycoming (Pennsylv'a) Chronicle, we learn that a meeting was held at the court-house in that county, upon the subject of the Elmira (N. Y.) and Williamsport (Pennsylv'a) Railroad. It was there stated that a "gentleman in that county had received a communication from the Philadelphia Chamber of Commerce relative to that road." Thus it seems that our neighbors in Pennsylvania are resolved, not only to intercept the western trade, by connecting their works with the Ohio canal, and with Lake Erie at the town of Erie; but to hit us under the fourth and fifth ribs, also, by connecting with our own canal and Lake Ontario through the Cayuga and Seneca Lakes. Very well, when they have accomplished both of those works, they will undoubtedly permit us to pass through their territory to Ohio, with our great western Railroad, so that New-York may at least enjoy the trade of the west when it cannot go to Philadelphia.

When will New-York, like Pennsylvania, arise in her might, and say, We will, at least, enjoy all the advantages we possess,—if enterprise and perserverance can ensure it.

THAMES TUNNEL.—The Liverpool Albion says, arrangements have been made to resume this great work. That the portion already completed, even after the suspension of six years, is in a state of perfect preservation.

It is rumored, that some very important discoveries have been made by Dr. Nott, in the construction of steam boilers and furnaces.

Railroad from Lynn to Boston.—We are informed that arrangements are in progress for forming a company, to establish a Railroad between Lynn and Boston.

We observe that a Convention of the citizens of Western Pennsylvania is to be held at Butler, on the 34th instant, for the purpose of devising means to insure the completion of the Pennsylvania Canal to the town of Erie. This work will, of course, open a direct communication between Pittsburg and Lake Erie. The Sandy and Beaver Canal, which will connect the Ohio State Canal with Pittsburg, will also open a communication with the Lake.—The latter was commenced on the 25th ult. The Beaver and Mahoning Canal is another work whose object is to unite the Ohio and Pennsylvania Canals, by a route nearly mid way between the two already named.

The following extract from the Report of the Chief Engineer, relates to works in, and connected with, this harbor:

Fort Hamilton, Narrows, N. Y.—The slight defects in construction, always to be expected in a work of this magnitude, have been repaired, and the fort may, by the end of the present year, be considered as finished.

Fort Lafayette, Narrows, N. Y.—A portion of the unexpended balance remaining on account of this work, has been applied to the repairs of the sea wall. This became necessary in consequence of the failure of the mortar with which it was pointed, and the settling of the wall in many places.

Fort Columbus and Castle William, Governor's Island, New York Harbor.—The report of the Engineer charged with the repairs of these works, is highly favorable. In the former, the scarp walls, except the pointing and parapets, have been finished; the counterscarp revetments, and revetments of the glacis, are nearly completed. The facing of the covered way revetment, leading from Fort Columbus to Castle William, will be done this Fall. The masonry of the magazines and barracks, as well as that of the communications connecting the former, is finished, as is also the facing of the *redan*. All the masonry of the barracks on the south, west, and north fronts is nearly finished, and the roofs are in readiness to receive the covering; the masonry of those on the east front is in a state of forwardness. Measures have been taken to finish the repairs of Castle William as speedily as practicable.

Fort Schuyler, Throgs' neck, East river, N. Y.—Agreeably to your instructions, the operations on Throg's Neck have been limited to the making of such arrangements as will ennable the officer charged with the construction of this fort to prosecute the work with efficieney during the next working season. The most ample preparations have been made. A permanent wharf will be in readiness by the time it is required: the necessary boats and machinery have been provided; an ample quarry, of good quality of stone, prepared, and indeed every thing that may tend to expedite the work, when commenced, will be found in waiting.

not aware whether the sufficiency of such an expedient for the purposes of ventilation has yet been ascertained by experiment. It has been stated that the speed with which the engines will traverse the tunnels will be so great, that very little ventilation will suffice. But the ventilation necessary for the tunnel will be the same, at whatever speed the engine may proceed; for the air drawn through the fire during the passage of the engine will be the same whatever the speed may be. Each stroke of the piston will draw through the fire the same quantity of atmospheric air; and it is obvious that the same number of strokes of the piston will produce the same number of revolutions of the wheels, and therefore the same progressive advance of the engine at whatever rate the piston may move. If the engine moves rapidly through the tunnel, it will, therefore, still vitiate the same quantity of atmospheric air; but there will be this convenience, that the passengers will not be detained in the air so vitiated any considerable length of time. The longest tunnel upon the projected line will be traversed in less than five minutes, and the shafts will subsequently remove, though perhaps not very speedily, the impure air.

In cases where it is not found practicable to traverse the valleys by embankments, bridges to support the railroad, of great extent, have been projected, by which the valleys may be arched over. One of the most stupendous of these works is the viaduct intended to bestride the valley of the Ouse. This work, which will be situate between Newport Pagnel and Stony Stratford, will cross the valley of the Ouse about a mile and a half eastward of the latter town; its extreme length will be a mile and a quarter, and the height of the level of the rails at the centre arch above that of the water will be nearly fifty feet; the centre portion will be supported on seven magnificent arches, each of fifty feet water-way; the keystone of each arch not to be less than twenty-five feet above the surface of the ground. The extreme ends of the viaduct will be formed by embankments. By such gigantic efforts of labor and skill, the inequalities of the ground will be greatly diminished, though not absolutely overcome.

Between the extremities of the line at London and Birmingham, there will remain five ridges of different elevations, separating six valleys varying in depth; so that the line undulates throughout nearly its whole extent. The entire length will be 111¼ miles: of this there will only be nine and a quarter miles absolutely level. Proceeding from the Depot near Primrose Hill there is a gentle descent of eight feet in two miles to the valley of the Brent; there is then a gradual ascent amounting to 128 feet in eleven miles, by which the line is conducted to the crest of the first ridge at Olney; the road then descends eleven perpendicular feet, and crosses the valley of the Colne; it next encounters the second ridge, which it ascends for fifteen miles at the average rate of about fourteen feet in a mile. From the summit of this ridge, situate at Tring, thirty miles from the Depot, it will descend for twenty-three miles, falling 160 feet; here it will be conducted by the great viaduct over the valley of the Ouse, and again ascend a ridge at Blisworth, between Northampton and Towcester: from the viaduct to the summit of this ridge the road ascends 100 perpendicular feet in 6 miles, being at the rate of about sixteen feet in a mile; it then again falls forty feet in five miles, and crosses the valley of the Ahen near Weedon, sixty-four miles from the Depot. It next crosses a ridge which intersects the line between Daventry and Northampton at Kilsby: this ridge is ascended by a slope twelve miles in length, and rising seventy-six feet. From Kilsby summit the road descends into the valley of the Avon by a slope of fourteen miles, descending 132 perpendicular feet; the line here, after crossing the Avon, passes through Coventry, and ascends the last ridge at Berkswell summit, by a slope of seven miles and a half, rising 115 perpendicular feet: from this summit it again descends into the valley of the Blyth, by a slope of three miles and a half, falling fifty-seven perpendicular feet; from which it ascends by another slope of ten miles, rising forty-eight feet, to the station at Birmingham.

On the whole line there are twenty-five miles and a half, proceeding from London to Birmingham, in which there is an ascending slope at the average rate of fifteen feet in a mile; and there are eighteen miles and a half in which there is a descending slope of the same inclination. The extreme gentleness of these slopes is such, that, in descending, the train may be safely permitted to move by gravity, so that during the descent the whole of the moving power may be saved. The power saved on the descending slopes may, therefore, be considered as nearly proportional to the additional power required in the ascending ones; and as no part of the road will require a greater addition to the power requisite on the level than two-thirds, the locomotive engines at present used, imperfect though they be, will be fully equal to the exigencies of the line. The expenditure of power from London to Birmingham will be greater than in returning; because the station at Birmingham is about 350 perpendicular feet above the station at London.

The width of this magnificent road on the embankments will be twenty-eight feet; the rails of each line will be five feet asunder, and the line will be separated by a space of six feet; an additional space of six feet will be left on each side between the outer rails and the edge of the embankment. Where the road is cut through, elevations an additional foot in width will be allowed to each side for drains: the deepest chasms by which the road penetrates the elevations will not exceed fifty-five feet,—the greater number, of course, being considerably less; and the highest embankments by which valleys are crossed will not exceed 45 perpendicular feet. The width of the road in the tunnels will be six feet less than on the embankments; there being only a space of three feet left between the outer rails on each side, and the walls of the tunnel. The sides of the embankment will slope downwards by a more gentle inclination than that used on the embankments of the Manchester railway, being at the rate of two horizontal feet to one foot perpendicular.

Supposing—what, consistently with the results of the whole history of human invention, is in the last degree improbable—that the locomotive engines, though now only in their infancy, shall not receive any farther improvements, the *time* of a first class train from London to Birmingham would be only five hours and a half. The gentleness of the slopes will render their motion almost as uniform and punctual as that of the hands of a time-piece; so that the passage of the successive trains from hour to hour through the different parts of the country will almost serve the purposes of a clock.

It appears from documents obtained from the public offices, that the present number of passengers between Liverpool and London annually amounts to about half a million. If we may apply to this railroad results proportionate to those with which we are furnished by that of Manchester, we should expect that the number of passengers between the two towns would be increased in a threefold proportion. But there are obvious reasons which lead us to expect a much larger increase of intercourse, in proportion to the population of the two towns, than in the case of Manchester and Liverpool. Between these two places, the railroad passes through not a single town, or even village; the intercourse is, therefore, in a great degree confined to the population of Manchester and Liverpool themselves. Now, a large portion of the intercourse on the Birmingham and London railway will be supplied from the populous towns which skirt its course on either side. These tributary streams may be expected to swell the main current to at least double its magnitude. The distances of the principal places adjacent to the line, *in time*, from London, supposing branch railways to be formed, would be as follows:

	Hours.	Minutes.
Aylesbury,	2	30
Bedford,	3	30
Birmingham,	5	30
Dudley,	6	—
Kettering	4	15
Kidderminster,	6	30
Leamington,	5	—
Northampton,	3	—
Rugby,	4	—

The Grand Junction railroad, from Birmingham to Warrington, will be a work presenting less difficulties, and attended with a more limited investment of capital. The country through which it passes is less intersected by ridges and other inequalities; although here also a considerable extent of cuttings and embankments must necessarily be made. As a commercial speculation, it is needless to say that it presents the fairest prospects of a successful issue: indeed, the formation of the Birmingham and London line rendered the Grand Junction line inevitable. Thus, the whole kingdom from London, in a north-westerly direction to Liverpool, will be traversed by this great artery of communication; producing an interchange of benefits, physical, and moral, commercial, social, and political, the importance and amount of which it would be impossible to estimate or predict.

The formation of this great line of cheap and rapid communication has rendered the construction of similar means of intercourse in other directions inevitable; otherwise the benefits of the metropolitan market would be almost exclusively conferred upon those agricultural and manufacturing producers whose good fortune might place them in its neighborhood. In their own defence, therefore, landed proprietors and capitalists in every part of the country must exert themselves; for whatever doubts they may have formerly entertained as to the expediency of constructing such means of communication with the metropolis, they can hardly any longer hesitate as to what they should now do; unless they desire to see themselves cut off from the benefits arising from the production of articles which cannot be transported on turnpike roads or canals in competition with railroads. We find, accordingly, that various undertakings have already been set on foot for the construction of extensive lines of communication, in other directions from the metropolis. An act of Parliament was passed, during the last session, for the construction of a line connecting London with Southampton and Portsmouth, passing through Esher, Basingstoke, and Winchester. As this project was countenanced by the principal landed proprietors through whose property it will pass, the act passed the legislature without difficulty or expense.

The projectors of another line were not, however, so fortunate. It was proposed to cross the kingdom by a railroad in a direction due west from the metropolis, extending to Bristol, and passing through Maidenhead, Reading, and Bath, and in the immediate vicinity of Windsor, Oxford, Gloucester, Cheltenham, and Devizes. The company who applied for this act experienced, during the last session, the most vexatious and determined opposition on the part of some of the landed proprietors; and, after having been driven to an expenditure of above £30,000, in the production of evidence, and in other parliamentary charges, the bill, though it passed the Commons, was thrown out in the Committee of the Lords, through the influence, it has been said, of a single Peer! The Company will find means to remove the opposition, and the bill will probly pass in the next session. This railway would facilitate the communication of the metropolis with Wilts, Somerset, Gloucester, Wells, Bridgewater, Taunton, Exeter, Plymouth, Devonport, Falmouth, and many other places. It would also, in conjunction with steam navigation, connect the metropolis with

the ports of the Bristol channel, with South Wales, and with the south-western coast of Ireland.

The Southampton line will open an easy communication with the coast of Hampshire, and by the Southampton steam-packets, with the Isle of Wight, and the Channel Islands; also with the ports of St. Malo, Havre, and Cherbourg. If the railway contemplated between Havre and Paris should be constructed, a communication would be thus opened between London and Paris, which would reduce the time of transit between those capitals to about twenty-four hours, allowing twelve hours for the voyage by steam from Southampton to Havre.

To form an estimate of the effects which these vast undertakings are likely to produce on the intercourse of the country, it will be necessary to consider the travelling which at present exists on these lines, and to compare it with the effects produced on the intercourse between Manchester and Liverpool. It appears from evidence given before parliamentary committees, that the annual number of passengers between London and Birmingham amounts to 488,342. By the stamp-office returns, it appears that the income produced from coaches passing along the proposed route of the Southampton railroad, at the present charge for travelling, amounts to four hundred and forty-six thousand one hundred and ninety-three pounds annually. Now, if we assume that the average cost of travelling the whole distance to Southampton is one pound, it will follow that the travelling along that line is equivalent to 446,193 travellers annually, the whole distance. It appears also, from similar returns, that the number of travellers along the proposed line of the Great Western Railway at present may be estimated at 302,118. Thus, along these three lines, the present intercourse would stand as follows:

Birmingham,	488,342
Bristol,	302,118
Southampton,	446,193
Total,	1,236,653

Now, we have already stated that the number of passengers between Manchester and Liverpool, before the establishment of the railroad, was at the rate of 450 daily; and that it was during the half year ending 31st of December, 1833, at the rate of 1210 daily; being an increase in the ratio of eight to three, very nearly. Supposing, then, that the three railroads now contemplated produce a like increase of intercourse, we shall obtain the probable number of passengers upon them by increasing the above estimate in the ratio of eight to three; the results would be as follow:

Birmingham,	1,302,244
Bristol,	805,642
Southampton,	1,189,848
Total,	3,297,734

Thus, the number of persons who would pass annually to and from the metropolis, along these three lines of road, would be nearly equal to a fourth of the whole population of Great Britain.

Our limits compel us to omit the notice of numerous important railways which are in contemplation, and some of which are in a state of very forward preparation; among these, there is one entitled to more especial notice, being not much less in extent than the Liverpool and Manchester railway, and passing through a district of great commercial importance. The line we allude to will be carried from the town of Preston in a southern direction through Wigan, to the Manchester railway; on which it will enter at a point equally distant between Manchester and Liverpool; thus connecting the whole district, for a distance of twenty-two miles from Preston to Newton, with Manchester and Liverpool. The act for this railway has passed the legislature, and it is now constructing under the direction of Mr. Charles Vignoles, civil engineer.

A line of railroad is already in an advanced state, by which it is proposed to connect Leeds and Selby, and thus open a more easy and rapid communication between that important mart and the port of Hull. Another line is in preparation, by which to cross the neck of the island, and to connect the Irish Channel with the German Ocean, extending from Carlisle to Newcastle.

Of the shorter railroads in progress may be mentioned that proposed to be carried from London Bridge to Greenwich. This work ought perhaps more probably to be called a *viaduct*, since it will be sustained by masonry, supported by a series of arches, for nearly the whole distance: its length will be three miles and three quarters, and the *time* will be twelve minutes.

The only railroad yet undertaken in Ireland is that which connects Dublin with King's Town, a distance of about seven miles. This road, which is now completed, has been executed under the superintendence of Mr. Vignoles. King's Town and its neighborhood is the most populous district around Dublin; and besides being the most favorite watering-place, is at present the place of residence of the families of most of the wealthier mercantile and professional classes. By a recent arrangement, the post-office steam-packets from Liverpool and Holyhead land at King's Town harbor, instead of Howth. These circumstances, combined with other local advantages, present a fair probability of the success of this railway.

Notwithstanding the unquestionable commercial advantages which have resulted to the joint-stock company which established the Manchester railroad, it is certain that these advantages are considerably less than they would have been had there been sufficient previous experience in the working of railroads, under the circumstances of so vast an amount of rapid transport as the company have found it necessary to undertake. Much still remains to be learned, not only with respect to the construction of the locomotive power, but likewise respecting the construction of the railroad itself. The cost of the locomotive power has been so great, that the directors lately thought it advisable to appoint a sub-committee of their own body, assisted by Mr. Booth, their treasurer, to inquire and report respecting the causes of the amount of this item of their expenditure, and to ascertain whether any and what measures could be devised for the attainment of greater economy. A very able and satisfactory report was made by this committee, or, to speak more correctly, by Mr. Booth, who was the only individual connected with it who really had a competent knowledge of the subject of inquiry.

It appears that previous to the establishment of the railway, Messrs. Walker and Rastrick, engineers, were employed by the Company to visit various places where steam power was applied on railways; for the purpose of forming an estimate of the probable expense of working the railway by locomotive and by fixed power. These engineers recommended the adoption of locomotive power, and their estimate was, that the transport might be effected at the rate of .278 of a penny, or very little more than a farthing per ton per mile. In the year 1833, five years after this investigation took place, it was found that the actual cost was .625 of a penny, or something more than a half-penny per ton per mile; being considerably above double the estimated rate. Mr. Booth very properly directed his inquiries to ascertain the cause of this discrepancy, by comparing the various circumstances assumed by Messrs. Walker and Rastrick in making their estimate, with those under which the transport was actually effected. The first point of difference which he observed was the *speed* of transport: the estimate was founded on an assumed speed of ten miles an hour, and it was stated that a four-fold speed would require an addition of 50 per cent. to the power, without taking into account wear and tear. Now, the actual speed of transport being double the speed assumed in the statement, Mr. Booth holds it to be necessary to add 25 per cent. on that score.

The next point of difference is in the amount of the loads: the statement is founded upon the assumption, that every engine shall start with its full complement of load, and that with this it shall go the whole distance. The facts, however, are, says Mr. Booth, that instead of a *full load* of profitable carriage *from* Manchester, about half the waggons *come back empty*; and instead of the tonnage being conveyed the whole way, many thousand tons are conveyed only half the way: also, instead of the daily work being uniform, it is extremely fluctuating. It is further remarked, that in order to accomplish the transport of goods from the branches, and from intermediate places, engines are despatched several times a-day, from both ends of the line, to *clear the road*; the object of this arrangement being rather to lay the foundation of a beneficial intercourse in future, than with a view to any immediate profit. Mr. Booth makes a rough estimate of the disadvantages arising from these circumstances, by stating them at 33 per cent. in addition to the original estimate.

The next point of difference is the fuel. In the orginal estimate, *coal* is assumed as the fuel, and is taken at the price of five shillings and tenpence per ton: now the Act of Parliament forbids the use of coal, which would produce smoke; the company have, therefore, been obliged to use *coke*, at seventeen shillings and sixpence a ton. Taking coke, then, to be equivalent to coal, ton for ton, this would add .162 to the original estimate.

These several discrepancies being allowed for, and a proportional amount being added to the original estimate, the amount would be raised to .601 of the penny per ton per mile, which is within one-fortieth of a penny of the actual cost. This difference is considered to be sufficiently accounted for by the wear and tear produced by the rapid motion; more especially when it is considered that many of the engines were constructed before the engineer was aware of the great speed that would be required.

When we formerly called the attention of our readers to this subject, we stated that the proceedings on this railway ought to be regarded as merely experimental; that the engines must be consequently varied in weight and proportion; that each quarter would produce new ones of increased power and efficiency; and that, consequently, the expenses thus incurred for a given amount of traffic ought not to be regarded as the permanent and regular expenses of the road, but rather as the price paid for that knowledge which could be obtained by no other means than by experiments on the same vast scale. We find that subsequent events have fully confirmed our opinions.

"What then," says Mr. Booth, in the Report already alluded to, "is the result of these opposite and mutually counteracting circumstances? and what is the present position of the Company in respect of their moving power? Simply, that they are still in a course of experiment, to ascertain practically the best construction, and the most durable materials, for engines required to transport greater weights, and at greater velocities, than had till very recently been considered possible; and which, a few years ago, it had not entered into the imagination of the most daring and sanguine inventor to conceive; and farther, that these experiments have necessarily been made, not with the calm deliberation and quiet pace which a salutary caution recommends, making good each step in the progress of discovery before advancing another stage, but amidst the bustle and responsibilities of, and large and increasing, traffic; the directors being altogether ignorant of the time each engine would last, before it would be laid up as inefficient, but compelled to have engines, whether good or bad; being aware of

various defects and imperfections, which it was impossible at the time to remedy, yet obliged to keep the machines in motion, under all the disadvantages of heavy repairs, constantly going on during the night, in order that the requisite number of engines might be ready for the morning's work. Neither is this great experiment yet complete; it is still going forward. But the most prominent difficulties have been in a great measure surmounted, and your committee conceive that they are warranted in expecting that the expenditure in this department will, ere long, be materially reduced, more especially when they consider the relative performances of the engines at the *present time* compared with what it was two years ago."

We must now conclude these observations on the Manchester railroad, without noticing what appears to us of scarcely less importance than the subject to which the Committee have directed their inquiries,—we mean the state of the road itself. No one who has recently travelled on it can be ignorant to what a great extent the rocking and swinging of the carriages from side to side is increased. We are quite aware of the impossibility, under the circumstances, to obviate entirely an effect of this kind; but it now amounts to a degree which is not only inconvenient to travellers, but which cannot fail to be highly detrimental both to the carriages and to the road. This effect will doubtless be traced to the inequalities which have been produced in the joinings of the rails. On examining the rails in various parts of the road, we found a very small proportion of them in which the joinings had maintained that degree of exactness which is indispensable to safety and stability, when great speed is attempted. In most cases, the surface of one rail at the joint is more or less depressed below the surface of the other, and in some cases this depression amounts to a serious fraction of an inch. The consequence is, that the passage of the wheels over the rails can be distinctly felt in the carriages, and wherever two inequalities do not occur together at corresponding joints, and in the same direction, the carriage receives a lurch more or less violent according to the amount of the inequality. The effect of the collision of the wheels on the rails at the joints is, in many cases, rendered quite perceptible. We have ourselves taken from the road pieces of iron of considerable magnitude, detached from the rails at those joints by the succession of blows which they receive as the wheels pass over them. The remedy for these defects must be sought in giving greater stability to the sleepers and chairs which sustain the rails. It would be also extremely desirable to keep an exact register of the breakages of rails in different parts of the road,—specifying in every case the part of the rail where the fracture takes place. By this means we should be enabled to trace, with some degree of certainty, the causes of this course of wear. For example, it is at present doubtful on what part of the road fractures most frequently take place; it is said to be on the descending planes; but we apprehend that this statement depends more on conjecture than on ascertained facts. It would be also useful to ascertain whether the fractures take place more frequently *over* the chairs or *between* them; also, whether they happen oftener at the extremities of the rails, or in some intermediate part. The surface of the fractures should also, in every case, be carefully examined, to determine whether any accidental flaw has existed in the structure of the metal. Such a body of facts as it is in the power of the Directors to collect, at no cost to the Company, but by giving the necessary directions to their subordinate agents, would form an invaluable storehouse of knowledge for the guidance of their future operations, and those of other railroad companies.

We believe that one source of extraordinary expense, to which the Company have been subjected, may be traced to the adoption of *fish-bellied* instead of parallel rails, and to the insufficient weight of metal in them. The theory of the fish-bellied rail is doubtless seductive; and if the sleepers and blocks were absolutely immovable, they would, with a given weight of metal, have the advantage over the parallel rail—but in a rail of this form, on the slighest subsidence of the sleeper, or shifting of the chair, the rail being deserted by its support, its weakest point is immediately exposed to the incumbent weight of the waggons under the most disadvantageous mechanical conditions. In a word, the very circumstances which constitute the advantage of the fish-bellied rail are here reversed, and produce a proportionate liability to fracture. Independently of this, the weight of the rails (35 lbs. per yard) was quite insufficient; and we believe that where fractures take place, the Company have deemed it advisable to replace them by rails at 50 lbs. to the yard.

The Leeds and Selby Railroad Company have profited by this experience, and have rejected the fish-bellied rail; laying down a durable road of parallel rails at 50 lbs. per yard.

The advantages of railroads have of late years become so apparent, that their construction has been undertaken to a certain extent on the Continent. In France, a double line of railroad has been constructed, extending from St. Etienne to Lyons, a distance of thirty-four miles. This road is not adapted for very heavy transport, the rails weighing only 26 lbs. per yard. To obtain a sufficient level, fourteen tunnels were constructed; one of these is a mile in length; another, more than half a mile, is carried under the river Gier. The road is carried by a viaduct over the Soane. In the cost of this road we have a notable example of the commercial wisdom of our neighbors, who paid for the iron used on it four times the price at which they could have obtained it from us! A part of this road is a self-acting plane, on which the loads are moved by their own weight; on the other parts of it locomotive engines have been used.

A continuation of this road has been constructed from St Etienne to Roanne, extending about fifty-five miles. It consists of a single track; the first thirteen miles being formed of cast iron rails of 43 lbs. to the yard, and the last forty-two miles of rolled iron, 26 lbs. to the yard.

Among the enterprises of this kind undertaken in Germany, the railroad from Budweis to Lintz merits notice. The extent of the line is about eighty English miles; it was commenced under the direction of Gerstner in 1825, and is composed of wooden beams, bearing flat rails of iron, six yards in length, two inches in width, and one-third of an inch in thickness. It is intended for the purposes of general commerce, but more especially for the transport of salt.

Food.—By the experiments of Dr. Beaumont, it has been satisfactorily proved that from whatever is introduced into the stomach, the same article is invariably elaborated, whether animal or vegetable, tough or tender, it matters not; the result is the same, under all circumstances, when the digestive process is properly carried on. In the vicinity of Hudson's Bay, one of the exploring party, in those inhospitable regions, says he visited a cabin, one evening, when the inmates were at supper, which consisted of raw flesh of seals, fat, birds and entrails, which constituted a delicious meal. A young girl, the belle of the tribe, was sitting by, biting the inside of a seal to pieces, and distributing the bits to her companions. Train oil, particularly when rancid, is a delicious article, being both meat and drink for Greenlanders. Yet, it is worthy of remembrance, the chyme, the nutritious fluid which nourishes the body, is always the same, whether elaborated from putrid aliments or the most savory viands.—[Scientific Tracts.]

Manufacturing Establishments at Cincinnati, Ohio, in 1834.

There are more "manufacturing establishments" in this city than in any city or town in the west. Pittsburgh ranks next to us in that respect, and perhaps is ahead of us, when we take into consideration the difference of population. Cincinnati has a third more inhabitants than Pittsburgh. We have twelve or thirteen foundries and engine factories, for the manufacturing of engines for steamboats, flour mills, grist mills, rolling mills, and for blast furnaces, used in this section of country, and for sugar mills, corn mills, cotton gins, saw mills, and other uses, for the south, where an immense amount is exported yearly. An estimate was made in 1832, for the year previous, of the amount exported of articles of the above description, and it exceeded $400,000.

We have also a large and extensive rolling mill, owned and conducted by Messrs. Shreve, Paull, and M'Candless, gentlemen of great enterprise, who employ about one hundred men; they cut some ten to eleven tons of nails per week. An extensive and complete spade and shovel factory; seven or eight bell and brass foundries, where an almost unlimited amount of work is done; twelve steam saw mills, all of which are conducted on a very large scale—at most of them there are machines connected for cutting laths, shingles, &c.—5 to 7000 laths can be cut in an hour. At some of these mills they have a saw for cutting boards and timber, a circular saw, and a machine for planing flooring boards, all driven by steam power.

Two flour mills, one owned by C. Bradbury, Esq., and driven by water from the canal—they make sixty or seventy barrels every twenty-four hours. Connected with this establishment is an oil mill, for the manufacturing of linseed and castor oils; there is also a mill connected for grinding and sifting corn meal, large quantities of which are barrelled and exported. Our largest and most extensive flour mills in this section of the state are on the Big and Little Miami rivers, which empty into the Ohio above and below this city, and are situated from ten to fifty miles from Cincinnati; they manufacture, some one hundred, some one hundred and fifty, and some two hundred barrels, every twenty-four hours. All this flour is sent to this market by canal and waggons, and then exported to New-Orleans, the Atlantic cities, &c. The other flour mill in the city is worked by steam, and can manufacture, when in operation, one hundred and fifty barrels per twenty-four hours. I would stop here to remark, that there are about sixty steam engines in constant operation within the corporation lines, exclusive of those on our steamboats, and *all* high pressure; low pressure engines are not in good repute in the west.

A card manufactory, owned by M. P. Cassilly, Esq. where every description of machine cards are made. A large number of establishments for the manufacture of steam boilers, where hundreds of men are constantly employed. A stereotype foundry, and also a large and extensive type foundry, owned by N. Guilford, Esq. and others, where is manufactured every variety of type, printing presses, and every article connected with the printing business; there are eleven or twelve machines for casting type,

and sixty to seventy hands are constantly employed; they manufacture to the amount of some 50 to $60,000 per year.

A steam fire engine factory, owned and conducted by Messrs. Chase and Seymour. The engines manufactured by them are equal for power, beauty, and workmanship, to any manufactured east of the mountains.

A patent lever lock factory, by Messrs. Shawk and Fitz.

A steel saw and file factory, by Messrs. Garrard & Co.

A printing press manufactory, on an extensive scale, by S. Dickinson.

A saddle tree manufactory, machinery driven by steam, conducted by Messrs. Kendall & Co.

A clock factory, by Lerman Watson, Esq. where are manufactured clocks, both of brass and wood. The establishment is a large one; many hands are employed, and many clocks made, of every description.

A factory for rolling sheet lead, and drawing lead pipes, by steam, for hydraulic purposes.

A steam stone saw mill. This establishment is worked on a new principle, and is patented to the proprietor, (Mr. Jas. Henderson.) It cuts stone with great accuracy.

A white lead manufactory, by steam power, owned by James M'Candless, Esq.

A bark and leather rolling mill, owned by the Messrs. Clarks, and worked by steam. The manufacture of malt liquors is carried on very extensively in the city, and to great perfection. There are eight very large breweries, and the beer, porter, and ale, manufactured by them, is equal to any I have ever seen in the eastern cities. We have a great number of snuff and tobacco manufactories, last factories, candle and soap factories, &c. Hats, furniture, &c. are manufactured in great quantities, and exported for sale to Kentucky, Tennessee, Mississippi, Louisiana, and every State south and west of us.

My limited information on the subject of manufactories, as well as want of time, will prevent me from giving you a more minute account of the manufacturing and mechanical business carried on to a very great extent, and to equally great perfection, in Cincinnati. I have named a few, and only a few, of the largest establishments, those that have come to my mind while writing; there are many others, where great numbers of hands are employed, that I do not at this moment think of. Opposite the city, at Newport, is a large cotton bagging factory. It is on a very extensive scale, owned by an incorporated company, with a capital of half a million. They manufacture bagging, bale rope, twine and cordage, Kentucky jeans, cotton and woollen coarse goods, sheet lead, and pipe—all of which is carried on by steam power. The machinery, when in full operation, will use annually 450 tons of hemp, 850 bales of cotton, 95 tons of wool, and 200 tons of lead. The agent resides and transacts all the business of this establishment in Cincinnati. There is also, in Newport, a steam saw mill.

In Covington, also opposite to this city, is a large cotton factory, owned by C. Macallister & Co. of this city; they run 2500 spindles, and manufacture 300,000 lbs. cotton yarn per annum. Sixty hands are employed. The yarn is sold here. There is also in Covington a rolling mill on a large scale, a rope walk, steam flour mill, and a steam saw mill.—[Patriot.]

Steamboats on the Western Waters.

In a publication made by the writer of this article in 1829, on the interesting subject of steamboats, it was calculated, that from the time of their first introduction on the western waters in 1811, until that period, their number amounted to about three hundred and twenty-three. Their united tonnage was estimated at fifty-six thousand tons. From the best data which could be procured from the most intelligent sources, the original cost of these boats was five millions six hundred thousand dollars, and the repairs on the same number, assuming that none of them would last longer than 1832, was set down at two millions eight hundred thousand dollars. Now, although there were five or six boats built between the years 1811 and 1817, the latter period may be assumed as the epoch of their regular and successful introduction; in 1825 they were brought to their present state of perfection. It results, then, that the amount expended for the building and repairing of steamboats, in a period of about eleven years, was equal to eight millions four hundred thousand dollars. As the number of steamboats was increasing annually, no fixed amount can easily be assumed for the yearly expenses; but for the year 1829, the sum was fixed at two millions five hundred thousand dollars; if, then, five hundred thousand dollars be considered as a fair yearly average from 1818, the total amount of money expended on the shores of the western waters, up to 1829, inclusive, will be little short of fourteen millions of dollars. When it is considered that this circulation and expenditure of money was exclusively created by the introduction of the steamboat, the importance of this invention to the valley of the Mississippi may be conceived. It has produced an advance of prosperity that would have required more than a century to have realized in the ordinary progress of human affairs; it has produced a revolution in business little inferior in importance to that which followed the discovery of the art of printing.

On the 1st of January, 1824, an official list of steamboats, from an authentic source, gives the whole number of two hundred and thirty, whose aggregate amount of tonnage is equal to about thirty-nine thousand tons. Allowing the cost of building at a rate much lower than the rule adopted three years since, the capital now invested in this stock will exceed three millions of dollars. The expense of running may be put down nearly as contained in the following scale:

60 boats over 200 tons, 180 running days, at $140 per day,	$1,512,000 00
70 boats from 120 tons to 200, 240 running days, $90 per day,	512,000 00
100 boats under 120 tons, 270 running days, $60 per day,	1,620,000 00
Total yearly expense,	4,644,000 00

This sum may be reduced to the different items producing it, in the following proportions, viz.:

For wages, 36 per cent., =	$1,671,840 00
Wood, 30 per cent.	1,393,200 00
Provisions, 18 per cent.	835,920 00
Contingencies, 16 per cent.	743,040 00

This result is truly striking to those who were accustomed to the state of things on our rivers within twenty years. The difference in the amount of wages paid is in itself very considerable; but the item of fuel is one created exclusively by steamboats; and when it is considered that nearly one million and a half is expended every year at a few points on the Mississippi valley, it presents a vast field for speculation. The immense forests of beech and other timber, unfit for agricultural purposes, were, before, not only useless, but an obstacle to the rugged farmer, who had to remove them before he could sow and reap. The steamboat, with something like magical influence, has converted them into objects of rapidly increasing value. He no longer looks with despondence on the denseness of the trees, and only regrets that so many have already been given to the flames, or cast on the bosom of the stream before him.

At the present period, the steamboats may be considered as plying as follows, viz.:

25, over 200 tons, between Louisville, New-Orleans, and Cincinnati, meas'g	8484 tons.
7 between Nashville and New-Orleans,	2585 do.
4 between Florence and New-Orleans,	1617 do.
4 in the St. Louis trade,	1002 do.
7 in the cotton trade,	2116 do.
57 boats not in established trades, from 120 to 200 tons,	8641 do.
The balance under 120 tons in various trades,	14,655 do.
	39,000

In the New-Orleans and Louisville trade, the boats over two hundred tons make about one hundred and forty trips, in prosperous seasons; those of smaller size make from fifty to sixty trips. But to go into an estimate of the number of voyages made by the boats in the different trades is impossible, because no regular data are furnished, and the result depends upon a variety of contingencies.

Previous to the introduction of the steamboat in 1817, about twenty barges, averaging one hundred tons, afforded the only facilities for transporting merchandise from New-Orleans to Louisville and Cincinnati. These making but one trip within the year, gave the means of bringing up only two thousand tons. The present tonnage in this trade exclusively having been stated to be 8484 tons, gives the amount employed, amounting to one hundred and forty trips in the season, to be 1,187,760 tons: a cause capable of producing a revolution in sixteen years hardly equalled in the annals of history. The effects of these causes upon western commerce have necessarily been immense. The moral changes alone are felt throughout the west, and the effect on prices is almost incalculable: the imported article has fallen in a ratio equal to the increased price of western products. In looking back to the old means of transportation, we cannot conceive how the present demand and consumption could have been supplied by them.

To those who are acquainted with the early mercantile history of our country, when it was no uncommon thing for a party of merchants to be detained in Pittsburgh from six weeks to two months by low water and ice, the existing state of things is truly gratifying. The old price of carriage of goods

from the Atlantic seaboard to Pittsburgh was long estimated at from five to eight dollars for one hundred pounds. We have instances, in the last five years, of merchandise being delivered at the wharf of Cincinnati, from Philadelphia, by the way of New-Orleans, for one dollar per hundred.

It may not be useless or uninteresting to give an idea of the *mortality* among steamboats in a given time. It is not pretended that any decided inference can be drawn from this statement, or that the facts go to establish any fixed rule. But under the present situation of steamboat discipline and regulations, a tolerably fair conclusion can be drawn from it. Taking the period, then, of two years, from the fall of 1831 till that of 1833, we have a list of boats gone out of service of sixty-six: of these, fifteen were abandoned as unfit for service, seven were lost by ice, fifteen were burned, twenty-four snagged, and five destroyed by being struck by other boats. Deducting the fifteen boats abandoned as unseaworthy, we have fifty-one lost by accidents peculiar to the trade. In number, this proportion is over twelve per cent. per annum; in tonnage, the loss is upwards of ten per cent. Amount snagged, 3721 tons; burned, 2330 tons.

The foregoing calculations and statements afford a great field for speculation. It is evident that there is a vast amount of surplus tonnage, and, of course, the business at present is entirely overdone. Indeed, from a full investigation of the subject, a few years since, by a committee appointed for the purpose, it was fully ascertained, that although the benefits conferred on the valley of the Mississippi were incalculable, the stock invested in boats was, as a general rule, a losing investment—in many cases, a total sacrifice. In a few cases, owing to a fortuitous combination of circumstances, money has been made; but the instances are so few as not to affect the rule. Time may correct this evil; but in a business in which public interest and public safety are so much concerned, a little governmental interference and assistance might be useful, and ought to be tendered. Some legislative action, which might tend to arrest the fearful increase of accident, has long been a desideratum; but how this is to be applied, presents the great difficulty. An experiment, however, has been tried, which seems to hold out the prospect of success. We allude to the company which was formed in 1832–3, called the Ohio and Mississippi Line of Transportation. During the existence of this company, not an accident of any kind occurred to person or property. A perfect regularity in arrivals and departures was introduced, and as all the good boats were in the same interest, there was no foolish rivalship, and consequently no injudicious racing. How far the post-office department would be justifiable in aiding such an association we do not pretend to say, but in our humble view of the case, we consider the great interests of the west are much involved in the question; and when the great uncertainty and irregularities of the mail, which have hitherto distinguished the routes between New-Orleans, Natchez, and St. Louis, and Pittsburg, Louisville, and Cincinnati, are considered, something is expected. On the score of economy alone, the subject is worthy of the reflection of the general government. Probably nine tenths of the correspondence on the western waters is of a commercial character; the greatest portion of this is now transmitted, free of postage, by means of passengers: no one can prevent this. If a line of steamboats can be made interested in protecting the government, the general post-office would find it to its advantage to give liberal terms to such an establishment. N.

[Western Magazine.]

Manufactories in Pittsburgh.—The various manufacturing establishments of Pittsburgh are thus briefly enumerated in a late number of the Gazette of that city.

There are, says that paper, in the city of Pittsburgh, 16 "foundries and engine factories" of the largest denomination, besides numerous other establishments of less magnitude.

There are 9 "rolling mills," cutting two tons of nails and rolling eight tons of iron per day, on the average, and employing from seventy to ninety hands each.

There are 6 "cotton factories", with an aggregate of twenty thousand spindles, one hundred and sixteen power looms, and oen hundred and seventy hands.

Six extensive "white lead factories."

Five extensive "breweries," besides small ones.

Six "steam saw mills."

Four "steam grist mills."

Ten extensive "glass works."

Upwards of one hundred "steam engines in full operation."

There are, moreover, innumerable establishments for the manufacture of ploughs, timber, wheels, screws of all kinds, saddle trees, machine cards, bells, brass work of every description, locks, &c. &c. all manufactured extensively for exportation.

[From the Journal of the Franklin Institute.]

Report on Mr. Peck's Method of Propelling Boats.

The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania for the promotion of the mechanic arts, to whom was referred for examination a Plan of Propelling Boats, invented by Mr. J. Peck, of Oakland, Jefferson county, Tennessee, report—

That the inventor proposes to employ what he terms a *multiplied crank*, attached to an axis made to revolve horizontally by some power not indicated in the sketch before us. The several wrists of the compound crank are to have either setting poles or hooks attached, one to each wrist, which poles or hooks are to act successively in urging the boat forward, by applying, when poles are used, to the bottom of the canal or stream, and when hooks are substituted, to a rack, or rope, extending the whole way on the shore. Coiled springs are to be placed in some part of each pole, to prevent the effect of sudden and violent impulses. When the pole is used to apply to the bottom, a species of foot, made of three or four strips of metal, attached by hinges to the lower end of the pole, are to spread out and present a large surface to the soft bottom of the stream, to avoid sinking deep into the mud.

The slight sketch in the hands of the committee does not show any provision for guiding and directing the poles, nor obviate the difficulty from unequal depths on the two sides of the boat, when poles are used on both sides.

The method appears less suited to a railway than the rack-rail already in use, in connection with toothed wheels, to insure the advancement of locomotive engines.

It seems unlikely that this plan will supersede the more simple methods already used for propelling boats, unless under very peculiar circumstances, and with some arrangements for obviating the practical difficulties which are not indicated in the sketch before us. By order of the committee.

William Hamilton, Actuary.

March 13, 1834

Report on Mr. B. Dugdale's Wind-Mill.

The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania for the promotion of the mechanic arts, to whom was referred for examination a Horizontal Wind-mill, invented by Mr. B. Dugdale, of Burlington, N. J., report—

That the machine in question consists of an upright shaft revolving on a pivot in a step at its lower end, from which shaft, near its upper extremity, proceed, in one horizontal plane, ten equidistant arms; and from near the middle of the same shaft, proceed ten corresponding arms, also in one horizontal plane. Between each pair of corresponding arms, oblong rectangular frames of wire are hung, (at the extremities of the arms,) in such a manner as to admit of a horizontal vibration, through an arc of about ninety degrees. To these frames the sails are attached by small rings of wire, which can slide up and down the vertical bars of the frames.

The operation of raising the sails is performed by means of cords, one of which is attached to the stretcher at the upper end of each sail, and passes through a pulley at the extremity of the upper arm, along that arm to the shaft, and down the shaft to a collar sliding on the same. When this collar, to which all the cords are attached, is depressed on the shaft by means of a lever, all the sails are raised simultaneously. Again, when the collar is elevated, the cords become slack, and the sails drop by their own weight.

The vibratory motion allowed to the frames which support the sails, is so regulated that the sails on one side of the shaft present their surface to the wind while those on the opposite side offer their edges only: the efficiency of the machine is due to this arrangement.

Your committee deem it unnecessary to expatiate upon the merits of this wind-mill, or to discuss the patentee's claim to originality in his invention; but will merely refer all who are interested in the subject to the Repertory of Arts, and to the Edinburgh Encyclopædia, in which they will find described several mills operating upon the same principle, some of which closely resemble this one in the details of their construction. By order of the committee.

William Hamilton, Actuary.

March 13, 1834.

Report on Mr. Smith's Compass Needle.

The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania for the promotion of the mechanic arts, to whom was referred for examination an Improved Compass Needle, manufactured by Mr. —— Smith, of Washington City, report—

That they have examined the needles submitted to them for that purpose by Mr. Trotter, together with the pamphlet of Mr. Smith, entitled "An Improvement," &c. and the notice of the patent for this improvement in the Journal of the Franklin Institute.

The claims in regard to the needles appear to be—

1. To a method of magnetizing them by percussion with what is called an electric rod.

2. To the removal of the influence of irregular magnetic distribution, and of local attraction, by "shifting feeders."

In regard to the particular method used by Mr. Smith, of conferring magnetism by percussion, the committee have no precise information, the needles not having been presented for their examination by the inventor himself, and no adequate description having been published of the details of his method. The general fact is well established in science, and testimony from various quarters speaks well of the application of it by Mr. Smith. Respecting the efficacy of the small pieces of soft iron, termed "feeders," shifting upon the magnet, and usually placed near the poles, the committee inquired and refer to the subjoined experiments for the data upon which their opinion has been formed. In these experiments they avail themselves of the kind assistance of Prof. Henry, of Princeton, who was, at the time they were making them, on a visit to our city.

The first object was to ascertain whether the feeders added to the intensity of the magnetic force in the needle.

For this purpose, the needle, furnished with its feeders drawn out to the marks on the ends, was suspended by a bundle of fibres of raw silk, free from twist. It was placed over a divided circle, that its deviation from the magnetic meridian might be observed. Drawing it out of that meridian it was made to vibrate, and the vibrations noted, when they had diminished so as to reach a certain extent. The mean of one hundred and twenty vibrations gave for the time of ten vibrations 80·47 seconds.

The weight of the magnet furnished to the committee was, without the feeders, 532·1 grains. The feeders weighed together 13·9 grains.

For these iron "feeders," two pieces of brass, of nearly the same weight and form, were substituted, that the mass of the needle might remain the same; the brass pieces were placed in the position formerly occupied by the feeders, and the needle was then vibrated.

The brass feeders were lighter than the iron ones by ·1 grain. From two series of experiments of one hundred and twenty each, the time of performing ten vibrations in this latter case was 79·87 seconds.

By the well known law expressing the relative horizontal intensities of the magnetism in these two cases,—namely, that the forces are inversely as the squares of the time of vibration,—the intensity in the first case was to that in the second as $79{\cdot}87^2$ to $80{\cdot}47^2$, or as ·98 to 1.

The force of the magnet, instead then of being increased by the feeders, is slightly diminished by them. Your committee must observe here, that it seems to them that this result is what should have been expected from placing a piece of soft iron within the poles of the magnet.

The next point to be examined was the efficacy of the "feeders" in preventing the effects of local attraction. This might be inferred from the results just given, but the committee preferred to subject it to direct experiment.

The same needle before used was placed upon a steel point, fixed in the centre of a graduated circle. A mass of soft iron was brought to a measured distance from the needle, when the "feeders" were on; the deflection produced was noted; the "feeders" being removed, the deflection produced by the same mass in the same position was ascertained. These experiments the committee did not consider susceptible of the same nicety which was used in the first inquiry. The piece of iron was a rectangular plate, nineteen and three eighths inches long by six and three eighths wide, and weighing twenty-four pounds. The following results were obtained, and may be considered to approximate within about one quarter of a degree of the truth.

When the iron plate was placed with its longest side making an angle of about forty degrees with the axis of the needle,—the least distance from the south pole of the needle, six inches,—with the "feeders" on, the deflection was 18¾°; with the brasses on, the deflection was 19°. The plate was now brought to half the distance above stated: With the "feeders" on, the deflection was 31¼°; with the brasses on, 31¾°.

The proportional difference in the deflections with the feeders on and off, is, in the first case, one in seventy-six, and in the second, one in about sixty-four. These numbers are to be considered as merely approximate, but they serve to show that the needle is less deflected with the "feeders" on, than when they are off, a result agreeing with the conclusions to be derived from the first experiments, which showed that the magnetism was weakened by the "feeders." If the magnetism had been entirely destroyed, the deflection would have been nothing. The needle subjected to experiment was, in fact, a very weak magnet, and the feeders made it still more feeble.

In the Transactions of the Irish Academy for 1788, a plan is proposed "to preserve the magnetism, and consequently the *polarity*, of the needle," by having it "cased with thin, well polished, soft iron, or else to have it armed at the poles with a bit of soft iron." Capt. O'Brien Drury, by whom this suggestion was made, modestly submits his invention to the judgment of those who are qualified to appreciate its merits, and we conceive that this judgment may be considered to have been formed by the neglect of the invention during the forty-six years which have elapsed since its publication. In the plan before the committee, the needle is not entirely cased, but is furnished with shifting bands of soft iron.

By order of the committee.

WILLIAM HAMILTON, Actuary.

March 13, 1834.

Report on Mr. W. Henderson's Chart of Commercial Weights.

The Committee on Science and the Arts, constituted by the Franklin Institute of the State of Pennsylvania for the promotion of the mechanic arts, to whom was referred for examination a Chart of Commercial Weights, submitted by Mr. William Henderson, of Philadelphia, Penn., report—

That this chart comprises scales of comparison of the weights of the principal commercial cities of Europe, and other parts of the world.

Scales of the ancient weights of France and Holland, being those most generally referred to in books of science, are also given.

On the left of the scale the names of the countries or cities are printed, and also the denomination of weight into which the scales are divided, as pound, rotoli, kilogrammes, &c. &c.

The divisions on the scales are numbered at every ten.

For facilitating the comparison of weights of different countries, meridional lines are drawn across the scales at convenient distances.

Where different weights are used in the same country, different scales are for the most part given, as in the United States of America, one scale is given of pounds troy, and another of pounds avoirdupois. The troy scale extends from 0 to 219 pounds, and the avoirdupois scale from 0 to 179 pounds; and, within this compass, the comparison of weights of different countries is made by taking equal distances on the respective scales, from 0, or from the nearest meridional line, to the weights given and required.

The committee are of opinion that the chart of Mr. Henderson will be found useful in commercial establishments, but would recommend that the meridional lines should be made to correspond with definite divisions of the avoirdupois scale, as by that arrangement the comparisons could be made by a simple inspection of the chart.

By order of the committee.

WILLIAM HAMILTON, Actuary.

April 9, 1834.

SILVER MINES OF BARNAOULE.—These are located on the confines of China, near the boundary between China and that country. There are thirty-two mines, wrought by eighty-two thousand persons, divided into three parties, so that the operations are never suspended night or day. The wages are very trifling. The whole of the silver is transported to St. Petersburg, for coining, and other purposes of the government.—[Scientific Tracts.]

ACTION OF TANNIN, AND SOME OTHER SUBSTANCES, ON THE ROOTS OF PLANTS. By M. Payen.—It has been repeatedly stated that trees soon die when the roots come into contact with the remains of the roots of oak trees cut down near them. This was supposed to be owing to the action of the tannin in the oak roots. M. Payen, after making a number of experiments on the subject, arrived at the following conclusions: 1st, Tannin, even in small quantity, acts deleteriously on the roots of certain plants: 2dly, Acids in small proportions are hurtful to germination: 3dly, Alkalies in small quantity are favorable to the progress of vegetation: 4thly, The neutralisation of the acidity developed during germination hastens its progress, and favors the ulterior developement of the plant. These experiments account for one of the useful effects of lime, or vegetable ashes, and of calcareous marl; and also for the unfavorable influence of alkalies used in too great quantity, or unequally distributed.—[Journal de Chimie Medicale, April, 1834, as quoted in the Lond. and Edin. Phil. Mag. for August, 1834.]

NEW-YORK AMERICAN.

DECEMBER 20—26, 1834.

LITERARY NOTICES.

SPIRIT OF THE ENGLISH RELIGIOUS MAGAZINES; by JOSEPH L. POWELL. Missionary Press: Burlington, New Jersey.—We have a specimen number of, or rather proposals for publishing, a new weekly sheet under this title, in small folio form, and at the price of $2 per annum. Among the British publications quoted from, are the British Critic, the Christian Observer, the British Magazine, the Christian Remembrancer, Christian Examiner, Eclectic Review, Presbyterian Review, &c. &c. We wish success to this undertaking; for without meaning to imply any inferiority in capacity on the part of American writers on religious subjects, it must be admitted, that in scholarship, learning and research, the European writers far excel them. The reason, we apprehend, is obvious,—the facility, in every part of Europe, of resorting to large and well furnished public libraries, a privilege invaluable in itself, and which in our country, with rare exceptions, is unattainable. Hence we think advantage will result from this republication. No better occasion perhaps than this will offer, to say with how much pleasure we have recently heard, that the Directors of our Protestant Episcopal Seminary—aware of the importance of a well selected and copious library—are now taking measures to induce the intelligent and wealthy members of that communion, to lend their aid towards the establishment of such a library. The object is a great one, and may, we hope, be greatly seconded.

ATLANTIC TALES, or Pictures of Youth; by Miss LESLIE, 2d edition.

THE AMERICAN GIRL'S BOOK, or Occupation for Play Hours; by Miss LESLIE, 2d edition.

THE EVERGREEN, or Stories for Childhood and Youth; edited by WALTER WEST, 2d edition.

THE VALUE OF TIME, a Tale for Children; by Mrs. BARWELL, author of Little Lessons for Little Learners, &c.

THE VALUE OF MONEY; by Mrs. BARWELL, &c.

These books for children are all from the press of MUNROE & FRANCIS, Boston, and for sale by C. S. FRANCIS here, and are all well adapted to the uses for which they are designed. Of the first three, which now come to us in second editions, we had occasion to speak in praise about this time last year, and we are glad to find that the public demand, as evinced by a call for another edition, ratifies our opinion. Of the last two, the "Value of Time" and the "Value of Money," we add that the subjects are well treated, and happily illustrated by incidents of daily occurrence in families and among young persons.

THE WORDS OF A BELIEVER, translated from the French of the *Abbé de la Mennais*. New York, C. DE BEHR.—We published some two weeks ago an extract from this translation, while it was yet in the press, and have only now to add that it is throughout rendered in our language, with the spirit and fervor of the original. The prefatory notice by the translator the Rev. F. L. HAWKS, apprizes us of what we had not before learned, that *M. de la Mennais* was first suspended as a Catholic priest, and finally excommunicated by the Pope for publishing these "Words of a Believer."

POEMS, by MRS. L. H. SIGOURNEY, 1 vol. Philadelphia: KEY & BIDDLE.—Our readers have experience, by the frequent introduction into our columns of the occasional poems of Mrs. Sigourney, how much we approve them, and will therefore anticipate the satisfaction we have in commending to their notice this collection of them, in a pretty volume, tho' not as accurately printed as it should be.

ROOKWOOD, a romance, by W. HARRISON AINSWORTH, from the second London edition; 2 vol.—Philadelphia: CAREY, LEA & BLANCHARD.—No one who reads these volumes will deny the talent and skill which, as a writer and painter, the author exhibits, but many will regret with us that so much of them should be wasted on a highwayman and his horse, and the slang of thieves and murderers. *Paul Clifford* was an unlucky original, for its success has tempted imitators, among whom certainly the author of Rokewood treads most nearly in the steps of the master of that school.

THE EARLY YEARS OF THE LATE BISHOP HOBART; by JOHN MCVICKAR, D. D. New York: Protestant Episcopal Press.—Some proof sheets of this forthcoming volume have been put into our hands. We cannot more satisfactorily explain the nature and aim of the publication, than by copying entire the preface of the editor.

THE perusal of the letters and papers of the late BISHOP HOBART, undertaken with a different view, have led to the following narrative. It may be that in the publication of it, the author, or rather the editor, for letters constitute the main portion, has overrated the interest of the reading public in a life already before them, and a character which, whatever be its excellencies, has long been familiar to the members of his own communion, while to those beyond, it can hardly be said to offer such claims as render the biography of public men at all times justifiable.

In the face of all these difficulties the editor has ventured to publish, and can now only state the feelings which have led him to it. When he began the perusal of these early letters, they seemed to him but as boyish effusions of but little value, and no interest beyond the family circle to which they related; but as he proceeded in his task, their number and minuteness began to give life to the picture they presented; one by one the features of character came forth, until by degrees they embodied themselves into a beautiful portraiture of an affectionate and generous youth—full of ardor and native piety, and devoted to every noble and benevolent pursuit.

This is the editor's first apology, since if these impressions be just, such a picture faithfully given cannot be without both interest and value. Virtue and piety want no reflected lustre from a great name; they are themselves the pure gold, and truth and sincerity the only stamp they need to give them currency.

The inclination thus excited to publish, a further consideration converted into resolution. It was this: Bishop Hobart's character was in one respect greatly misunderstood by those who knew him only in his public course. The untiring energy with which he devoted himself to official duty, was reputed by many to be personal ambition; and the unyielding firmness of his opinions as a Churchman, turned into an argument against his vital piety as a Christian. The native humility of his heart, the depth of his devotional feelings, the evangelical tone of his retired piety, were matters either wholly unknown, or else placed to the account of professional duties. Now the correction of such false opinions is a debt due alike to the reputation of Bishop Hobart, and to that of the church over which he presided; and in no way perhaps can it be more effectually done, than by the exhibition of him in the simplicity and open sincerity of youth; in days when there were no ambitious ends to gain, or professional proprieties to support, and in which neither fear nor favor can be supposed to have operated, to blind the judgment of those around him as to his real character. If we then find him as a boy, what he afterward was as a man, active, ardent, fearless, and devoted; fervent in feeling, but wise in action, bold in duty, but childlike in piety, yielding in matters of expediency, but uncompromising in principle, gathering around him wherever he went an attached circle of friends and followers, and using his influence over them to the wisest and best of purposes—that of advancing them in knowledge and virtue, and above all, in that holy faith, which from a child appears to have been his own guide and instructer; and if all this be found not in the recollections of partial friends, but in original documents which personal affection has preserved, then may we fairly answer all such doubts as to the genuineness of his virtues, by an appeal to the unpretending, but unexpected narrative of his 'Early Years.'

With this explanation the work is respectfully submitted.

Columbia College, Oct. 15, 1834

After such an introduction, it were needless for us to add, that the volume it precedes cannot fail to be of great interest; and appearing as it will about the New Year, will be deemed, we are sure, by very many, both by those who give and those who take, a most appropriate gift for that season.

A SKETCH OF CHINESE HISTORY, ANCIENT AND MODERN, &c. &c.; by the Rev. CHAS. GUTZLAFF, now and for many years past a resident in that country. 2 vols. New York: J. P. HAVEN.—Those of our readers who recollect the former publication of *Gutzlaff*, will look eagerly to these volumes. In one respect they will be disappointed; for the charm of personal adventure cannot be imparted to an historical narrative. As a summary, however, of the history of an extraordinary nation, compressed within reasonable limits, carefully compiled, and verified in modern instances by the personal knowledge and experience of the author, this is a work of permanent utility and value.

Mr. Gutzlaff treats as unfounded, the exaggerated notions entertained both of the intelligence and the power of the Chinese, though he concurs fully in the estimates made of the populousness of the country; on which head he thus speaks:

Whilst giving the enormous sum of 369 millions as the actual number of inhabitants in China, the author is fully persuaded that the last imperial census is as near the truth as it can be ascertained. Those parts of the empire which he has visited are extremely populous. He has taken the trouble of examining some parts of the census, and numbering the houses of small districts, and has invariably found that the population was underrated. The Chinese are naturally a very prolific people; few individuals only live a single life; early marriages, which seldom prove barren, are general throughout the empire. Government has always encouraged the matrimonial estate, and their ancient institutions devote a childless man to contempt. Thus the population must increase and multiply on a progressive scale. As the wants of the common people are so very few, and their habitual industry render every barren spot tributary to them, we may easily conceive that so large a population can find the means of subsistence.

Concerning the state of knowledge, he justly remarks, "When we see in Europe the press teeming with new publications, we ought rather to be astonished that among three hundred and sixty-seven millions of men, there is not one original writer, nor has there been for many years."

Both as a sample of the style of the writer, and as instructive in itself, we give the annexed sketch of the origin of the Turks, and of their introduction into China:

At the foot of the Imaüs, the Turks, a small, insignificant tribe of slaves, occupied with digging iron, served the great khan of the Geougen. Their first ancestor had been suckled by a she wolf; and thus was the savage bravery transferred into the veins of all his posterity. Born to slavery, they were cheerful under servitude, until it became intolerable. Bertezena, their first leader, harangued his countrymen, pointed out to them their abject state, and exhorted them to shake off the yoke. This horde of smiths and armorers sallied forth; and, with all the energy of a nation emerging from barbarism, conquered several neighboring tribes. To remind the nation of their humble origin, the prince, and leader himself, with his nobles, heated annually a piece of iron, and took with their own hands a hammer to beat it.

When their power was increased they demanded their freedom from their own masters; and, to secure this, Bertezena asked the daughter of the great Khen in marriage. His request was rejected with the utmost disdain; in revenge for which, the Turks attacked their old master, and defeated his army. The Chinese prince of Wei, in She-se, a bitter enemy of Geougen, took the conqueror under his protection; and, to remunerate the services he had done him and China, by subduing an inveterate foe, he gave him his own daughter in marriage.—Nomades, like the Huns, they despised the arts of civilized life. One of the successors of Bertezena, whom the Chinese call Moo-kan, was allured by the luxuries of China, and wished to build villages and cities; but this design was defeated by one of his counsellors, who said, "The Turks are not equal to one-hundredth part of the inhabitants of China,—

If we balance their power, and elude their armies, it is because we wander, without any fixed habitation, in the exercise of war and hunting. Are we strong, we advance and conquer; are we feeble, we retire, and are concealed. Should the Turks confine themselves within the wall of cities, the loss of a battle would be the destruction of their empire."

Their religion was vague: they worshipped the gods of the air, the wind and the rivers. Their laws were rigorous and impartial: theft was punished by tenfold restitution; adultery, treason and murder, with death. The punishment for the inexpiable guilt of cowardice was horrible. The throne of their chief was turned towards the east; and a golden wolf, mounted on the top of a spear, guarded the entrance of his tent. As soon as a youth was capable of bearing arms he received and wore them till his death. Their armies were as numerous as swarms of grasshoppers; and, within the space of fifty years, they had united under their standards numerous Tartar tribes; and were connected, in peace and war, with the Romans, Persians, and Chinese; having conquered the White Huns on the plains of Bokhara and Samarkand, they carried their victorious arms to the Indus. But though they thus extended their conquests in every direction, their chief still kept his court in the ancient abode of their ancestors, at the foot of the Imaüs. Had not their extensive empire been divided into five different kingdoms, they might, perhaps, have subjected the world to their sway; but these divisions created continual wars, and reduced the power of those wild conquerors to nothing; and five independent kingdoms were erected upon the ruins of the Turkish empire. The founder of the Tang dynasty, trembling at such a neighbor as the Turks, treacherously delivered up to the Hosona a Tartar prince who had taken refuge in China. When the Turkish ambassadors arrived at the Chinese court in 619, they were received with due honors; and heaven's son stooped greatly from his dignity to conciliate their goodwill. Indeed, it is said that the heroic Chinese fought against them with gold and silver lances,—a formidable weapon!—and thus averted an invasion which might have fixed the Turks in China, and freed Europe from this scourge. But, directing their vast martial force towards the West, (guided, perhaps, by a higher hand, which disposes of the empires of the world,) they produced one of those great revolutions which have had a lasting influence upon all the countries we inhabit. The Mongol conquests ceased in Europe with the conquerors who made them, whilst the baneful influence of Turkish dominion is still felt; and though the foundation of this strong hold of fanaticism has been undermined, though the Turkish empire, now in a state of dotage, is tottering to its basis, it is still suffered to exist.

It is easy to perceive in this sketch the inspiration drawn from the pages of Gibbon.

It is remarkable, that though often assailed by the Turks, the Chinese never were subdued by them, but on the contrary frequently defeated their elsewhere victorious armies.

The superstitions and sects of the Chinese are all noticed in their proper places. One of their philosophers, *Laou-keun*, gives this account of the creation: "Reason produced One, One produced Two, Two produced Three, and Three produced all things."

We would willingly dwell more at length upon the contents of these two volumes, but our limits forbid. We conclude, then, with the observation, that *Gutzlaff* here reinforces the opinion, so confidently expressed in his former publication, that decision only on the part of foreigners trading with China is wanting, to bring this absurd, lying and jealous nation, to the same courtesy of intercourse which exists among other peoples.

At the close of the second volume, there are a series of tabular statements, exhibiting the details of the English and American export and import trade with China for many years. These will be found of interest to merchants.

ANCIENT MINERALOGY, or an inquiry respecting Mineral Substances mentioned by the Ancients, &c. &c., by N. F. MOORE, LL D, Prof of the Greek and Latin Languages in Col. Coll.; 1 vol.; N. York, G & C. CARVILL & Co.—This is a very scholarlike essay, in which the erudition of ancient and modern times is made conducive to the entertainments and instruction of the reader of taste. As a *science*, the ancients knew nothing of mineralogy; yet they had a knowledge of many of the minerals now in use, and a skill in the working of them not surpassed, and in some instances—particularly that of engraving precious stones—not equalled at this day. This little volume exhibits satisfactorily, the state of knowledge in remote antiquity, and brings it down to the present time, when mineralogy has asserted its rank almost as an exact science. To the curious inquirer in natural history, as well as to the general reader, there is much attractive matter in these pages.

FRANCE, SOCIAL, LITERARY, AND POLITICAL. By H. L. Bulwer. 2 vols. Harpers.—This is, we believe, the first work of the brother of the popular author of 'Pelham,' that has been published in this country. It will procure him many readers, and some warm admirers. The style is sparkling and epigrammatic, and though the severe critic might characterize it as meretricious, it is, withal, agreeable. It often amuses by its piquancy, and sometimes rises to the dignity of eloquence. The materials of the work are various, entertaining, and instructive. The author's researches, indeed, have been rather diversified than deep, and the reader should be guarded in adopting many of his opinions; for when a writer aims so much at point, there is no knowing how often truth may be sacrificed to antithesis. And there is too much of that air of coxcombical superiority which the English are so fond of assuming when speaking of other peoples, and particularly of the French. We have already given several extracts among our daily miscellanies, which indicate the anecdote and lively sketches of character scattered through the work. We now quote something of a graver nature, a singular and most interesting conversation that took place at a fête given by the Duke of Orleans, a short time previous to those events which made him Philippe I:

It is given as M. de Salvandy has himself related it.

"It took place in consequence of the bon-mot—'*C'est une fête toute Napolitaine, monseigneur; nous dansons sur un volcan.*" The prince (Duc d'Orleans) standing behind or near the 'fauteuils' of the princesses and the king, seized my arm quickly as I read this, and doing me the honor to draw me towards him, 'That there is a volcano,' said his royal highness, 'I believe as well as you; and, at all events, the fault is no fault of mine. I shall not have to reproach myself for allowing the bandage to remain unlifted that covers the king's eyes. But what can one do? Nothing is listened to, and God only knows where this will lead us!'

"'Far! monseigneur, it will lead us far!—that is my conviction. I feel also in the midst of this fête so animated and so beautiful, a profound sentiment of sorrow; I ask myself where in six months will be this brilliant society? where will be these crowds so joyous? that princess so gay (alluding to Madame la Duchesse de Berri, who was 'galloping' with Count Rodolph d'Appony)? where, in fact, will be our country? Within six months we shall probably be divided into the proscribed and proscribing."

"'Certes,' answered his royal highness, 'I do not know what will happen—I do not know where those will be you speak of in six months; but I know where I shall be, whatever comes. I and my family will remain in this palace; it is enough to have been twice an exile through the faults of others. Whatever be the dangers, I shall not move from this spot; I shall not separate my lot and the lot of my children from the fate of my country. What I say to you I make no secret of elsewhere—lately, indeed, at Rosny, I said pretty fully what I think of all this; and there is the King of Naples, who was with us, and who was clearly of our opinion. That prince, whom you see so broken, and who is nevertheless four years younger than I am, is a man of a good deal of sense; circumstances oblige him to be an absolute king (Austrian bayonets), but his own inclinations would have led him differently. He has made I assure you, some very sensible observations. By-the by, we spoke at Rosney of some remarks of yours."

"I said that 'I was convinced that the monarchy was falling, and that I was not less convinced that the fall of the throne would compromise for a hundred years the prosperity and the liberty of France.'

"'In afflicting myself as much as you can do,' said the prince, 'at the conduct which the king is pursuing, I am not so frightened as you are at its probable results. There is in France a strong love of order—that France which the government will not understand, is excellent, is admirable; see how the law is respected amid so many provocations!—The experience of the Revolution (1789) is present to all; its conquests, its follies, and its crimes are detested. *I am convinced that a new revolution would in no respects resemble that which we have seen.*'

"'Monseigneur, that is to believe in a revolution of 1688. But when England departed from the path of legitimacy, the aristocracy remained as an element of order; with us there is no aristocracy to be called an aristocracy, and what there is will perish with the Bourbons; every thing will again be smoothed down to a level, and I do not think a pure democracy capable of founding any thing that is to have duration.'

"'Monsieur de Salvandy, you do not do justice to the effect of that diffusion of intelligence which follows the diffusion of fortunes. The world has completely changed since forty years; the middle classes are not all society, but they form its force, they have a constant interest in order, and they join to that knowledge which communicates the wants of a great empire that power necessary to combat and suppress bad passions. *Jacobinism is impossible where the greater portion of the community have possessions to lose.*'

"'I have always thought, monseigneur, and I still maintain the same opinion, that it is a dangerous error to consider that property alone is the guarantee of a desire for order. Property with us is so divided that it has its multitude, envious of every superior, and inimical to every power. I should fear that that multitude, being the most numerous party, and always disposed to satisfy its hatred of the higher classes, would soon, by its levelling schemes bring us to anarchy, if anarchy were not the commencement of a new régime.'

"'Monsieur de Salvandy, believe me, all that the country wants is the sincere establishment of a constitutional government; this is all it asks. The evil has arrived from the impossibility, among certain persons, of accepting at once, '*et de bonne foi*,' all the results of the Revolution, and of the Charta more particularly. The faults of the last Revolution sprang from the false distribution of rank and fortune, which was united with the wretched education that characterized the ancient régime. We have left all that behind us. My political religion consists in the belief, that with constitutional opinions all may be directed right. These principles I have always held. When an exile at the court of Sicily, I was asked, in order to obtain my wife, to make certain concessions. I declared that my opinions were invariable, that in those opinions I would bring up my children, and that I would do this as much for their interest as for a love of truth. The misfortune of princes is, that they do not know the people, and that they entertain and cherish ideas and opinions different from those whom they govern. This is why I gave a public education to my sons; and in every respect it has succeeded. I wished them at once to be princes and citizens. I wished that they should not deem themselves a favored race; that they should not participate in the habits of a corrupt circle; that they should not always have before their eyes the veil of a court education; that they should not be bound by the tastes of childhood to those interested in deceiving them, and moreover frequently deceived. Such has been my object; and I am certain that I have to congratulate myself on the course I have pursued.'

"The Duke of Orleans was at first standing; he afterwards made me sit down by his side; we were exactly behind Charles X., who might have heard every word we were saying."

Let us do justice to the King of the French! Henry IV. never delivered a speech which contained so much goodness, sense, and truth as there is to be found in these remarks; they offer a fair justification of Louis Philippe's conduct to the family he dethroned; they would offer the best security to the people whom he governs, if we had not unfortunately so many examples of the corrupting influence of power, of the best heart being changed, and the understanding blinded by a successful ambition.

M. Maroncelli has at length completed his arrangements for publishing by subscription an English translation of "My prisons," by *Silvio Pellico* with his own "additions" to the work of his fellow-prisoner and fellow-sufferer.

The translation heretofore given to the public from an English edition was feeble and inaccurate: that now proposed is from a pen that will do justice to the feelings, which the affecting and improving Record by *Pellico* of his ten sad years of imprisonment, must impress upon every generous heart. The additions by *Maroncelli* have never appeared in English.

The whole will now be given together in two well printed volumes.

We shall take pleasure in receiving subscriptions for the work at this office.

FOREIGN INTELLIGENCE.

LATER FROM FRANCE.—By the *Normandie*, our Paris papers come down only to the 14th ult. inclusive, and therefore, excepting a short paragraph from the *Journal des Debats*, of the 14th, make no allusion to the dissolution of the Bassano Ministry, which lived only as long as the last Revolution—*three days!*

The Paris papers of the 15th, (extracts from which we take from the Courier and Enquirer,) leave no doubt that that Ministry *was* dissolved, although the notion that its breaking up had any thing to do with our affairs, is unsupported by any extracts from the Paris papers of the 15th, or as far as we can learn by any letters, and is moreover in contradiction with the surmises of the French press generally, which seems to unite in ascribing the sudden exit of the scarcely installed Ministers, to the discovery, that the "*pensée immuable*"—as they call the resolute purpose of the King, to be his own Prime Minister *in fact*, let who may occupy the post *nominally*—would not hear of any concessions to the spirit of the Revolution of July. "The new Ministry will be the restoration of the Revolution of July," was the expression of the Duke of Bassano, which the King at once (according to the Journal des Debats) resented as an insult. However this be, it is clear to us that our affairs had no influence either in the formation or dissolution of the Ministry.

It seems to us to be very much like the breaking up of one of the Cabinet *Units* at Washington—the Chief was dissatisfied and so willed it.

The Chambers were still to meet on the 1st, but the dissensions and uncertainty which the recent changes manifest, render it perfectly clear to our understanding that no *early* effort would be made to obtain an appropriation for the treaty with this country.

[*From Galignani's Messenger of Saturday, 15th Nov.*]

THE MINISTRY.—The *Moniteur* of this morning is still upon the dissolution of the Cabinet.

The *Journal des Debats* says:—The Minister of the Interior, President of the Council, the Minister of War, who has also performed the duties *ad interim* of Minister for Foreign Affairs, the Ministers of the Marine, of the Finances, and of Commerce, yesterday, tendered their resignations to the King, which his Majesty accepted."

The *Constitutionel* mentions only four Ministers as having resigned, the Duke de Bassano, and Messrs. Teste, Passy, and Charles Dupin. It adds: "On Thursday evening, after M. Dupin's dinner, the Ministry still existed and assembled in Council. There the first important question submitted to the new Cabinet, the bill for 25 millions claimed by the United States, was discussed. It appears that the Doctrinary *coterie* although expelled from the Cabinet, was still powerful enough to give ascendancy to its opinions, since the bill for 25 millions, precisely as it had been rejected by the Chamber, was recommended.

This was enough to enable the new Ministry to foresee what was in store for it in future. Moreover, many circumstances contributed to show that obstacles of every kind would be raised. The cold reception, and the bustling intrigues of the Palace, diplomatic susceptibilities artfully excited the hostile attitude of the Doctrinary press.

The pitiful conspiracy on 'Change for the purpose of crushing the Cabinet by a fall of 20 centimes, perhaps, also the presence in the Council of a Member of the former Ministry, all had concurred to excite distrust, that uncertainty of the future, which was again increased by the want of homogenity among the new Members. One of the Ministers, whom the Opposition hailed as a guarantee in the Council and as a pledge of better times, M. Passy, we say appeared too much absorbed by these obstacles. Upon these however, he ought to have reckoned in accepting his appointment.

The anathema hurled against the Ministry, by one of the gravest organs of the Opposition (the *Courrier Francais*) seemed to have produced an unfavorable impression on the mind of a man who nevertheless had been accustomed to sacrifice to his convictions the transitory sweets of popularity, which can be only rendered durable by knowing how to lose it, in case of need, in order to recover it anew. Be this as it may. M. Passay thought he saw, and we are on this occasion of his opinion, a contradiction between the principles which he maintained, and the course into which he was to be led by this disastrous bill. He firmly stated that he could not consistently present as a Minister a bill which he had opposed as a deputy. He insisted, with the most honourable eagerness, that it would be flying in the face of the Chamber to reproduce, without a single modification, a law rejected by the most significant majority.—Messrs. Teste and and Charles Dupin seem to have supported M. Passy in this struggle, wherein the word 'resignation,' which is the *veto* of every honest Minister, was several times pronounced. The Council was broken up, and Messrs. Teste and Passy having previously concerted together, sent in their resignation at midnight. M. Charles Dupin, on hearing the fact very early on the following morning, sent in his own, which was followed by that of the Duke de Bassano. Messrs. Molé and Theirs are commissioned to recompose this Cabinet, twice found to be impossible. To complicate the embarrassment of the affair, M. Bresson, whose acceptace was guaranteed, is doubtles on his road to Paris, and will learn on the frontier that there is but one resignation more to give in. His return to Berlin is impossible, for he would be overwhelmed by ridicule, although he is innocent of this deception, in which France has participated with him"

TEA—The duty on tea in England amounts to adout seventeen millions of dollars.

Capt. Ross the Hero of the North has at length discovered something in England even more attractive than that which he reached during his last expedition. The worthy Captain has recently married a young and accomplished lady. With Captain Macheath the great Discoverer may sing—

"Were I laid down on Greenland's coast," &c

A Monument to Kean is about to be erected in Winchester Abby. It is to cost £1000, of which £400 had been already subcribed.

Osman Pacha, Grand Admiral of the Egyptian fleet, died on the 12th August at Constantinople, of the plague, after five days illness, in the 38th year of his age. The Sultan, who appreciated the extraordinary talants of the deceased, and had placed in him the utmost confidence, had intended to raise him to a very exalted station.

By the melting of the ice on the Glaciers, in the Canton of Uri occasioned by the unusual heat, the body of a young hunter, who perished thirteen years ago, was discovered on the summit of a peak.

LATE AND IMPORTANT NEWS FROM EUROPE.—The Liverpool packet ship *George Washington*, Holdridge master, of 24th ult., brings us London papers to the 23d (Sunday) inclusive; and their intelligence is of unusual interest, alike to politicians and merchants; for while cabinets have been going down, markets have been going up,—but first of politics.

To begin with France, where from peculiar circumstances, the ministerial mutations have become of unwonted interest in this country. The three days reign of the Duke of Bassano and his colleagues has been followed by the restoration to power of all those ministers whom that short lived cabinet succeeded, except the President of the Council, Marshal Gerard. An entirely new man, as a politician, *Mortier*, Duke of Treviso, takes the war department and the station of President of the Council. He is a soldier of the Napoleon regime, who will be content to hold the rank of Premier in subordination to the King, who in reinstating this *doctrinaire* cabinet, after due submission on their part, has more than ever established his unconstitutional pretension, to be the real and efficient prime minister.

The only actual appointments in the new Cabinet, are Lord *Lyndhurst* as Lord Chancellor, and the Duke of Wellington as Home Secretary, and filling *ad interim* ALL THE OTHER POSTS IN THE MINISTRY. Until Sir Robert Peel, at the moment of this crisis "picture-hunting in Italy'," could be heard from, no further appointments would, it was supposed, be made, although the list of *probable* ministers may rpove accurate.

From *Spain*, we have no additional accounts of much interest—though the Queen's cause seems a *little* brighter. Even that, however, will suffer discouragement by the Tory ascendancy in England.

[*From the Philadelphia U. S. Gazette*]

VERY LATE FROM JAMAICA.—By the arrival at this port of the brig Pilot, Capt. Milton, we have been put in possession by the kindness of a friend, of files of the Kingston Chronicle to the 28th ult.

A committee of the Legislature has had under examination a large number of property holders, as to the effects of the new apprentice bill. It seems to be the opinion, that under some kind of management the system might have succeeded; but under existing circumstances, there appears no hope of success, and the cultivation of sugar must be given up.

In St. Jago on the 21st of November, eleven blacks, convicted of insubordination and insolence towards their employers, were taken to the market place and publicly whipped, under the direction of the special magistrate.

A motion was about to be made, to petition the King to repeal the non-intercourse act between Jamaica and St. Domingo.

A Baptist clergyman named Abbot, was brought before the Legislature to testify, but he positively refused, and was committed to prison, whence he was once or twice brought by a writ of habeas corpus, but as often returned.

We have been informed that the apprentices on two estates in St. Ann's, (one of them named Windsor,) have struck work, and are at this moment in a state of rebellion. Should this be the case, in what light can the unfortunate inhabitants of Jamaica view the line of conduct pursued by the Executive? When we reflect upon the dangers with which we are threatened, and consider that the *actual* and lamentable state of the country has repeatedly been submitted to the consideration of his Excellency the Governor—that he has been seriously advised, nay, urged, by our Assembly, to adopt the only means by which the island might yet be saved from impending ruin, and perceive that his Excellency is still, even at the *eleventh* hour, apparently *deaf* and callous to the representations and advice of those who *value* their lives and *property*, we cannot but deplore whatever his Excellency's "secret instructions" may be, that he ever came to Jamaica—for we have every reason to fear, that the apprehensions entertained and expressed by the Assembly, are now on the eve of being realized.

SUMMARY.

THE SONS OF THE PILGRIMS celebrated the anniversary of the landing at Plymouth, in a most cordial and becoming manner on Monday.

The oration of *H. R. Storrs* was that of a statesman and a scholar—deducing from the past, examples and warnings for the future, and showing, by the instance of the settlers of New England, how indissolubly good government, liberty and happiness, are connected with institutions based upon general education, morality and religion. We hope Mr. Storrs will be required to publish this oration.

The dinner at the City Hotel was in all things agreeable—even to the few grains of parched corn on each plate, to remind those then about to feast luxuriously, of the straits to which the noble minded

and constant passengers in the *Mayflower* were at one time reduced.

The Hon. George McDuffie was inducted into office as Governor of South Carolina on the 11th inst.

The Globe informs us that gold has been procured to pay every member of Congress the full amount of their pay and mileage.

The Philadelphia United States Gazette speaks in terms of commendation of two elegant swords, manufactured by Mr. T. Fletcher, of that city, by order of the State of Maryland. The inscription on each makes known the object of the State in causing them to be made, and also their destination. On the hilt of one is the following inscription: "Presented to Col. NATHAN TOWSON by the State of Maryland, his native State, in consideration of his gallant services during the late war with Great Britain." The whole mountings of the sword are of solid gold, the scabbard is of silver gilt. On the hilt is a scroll, bearing the words Caledonia, Chippewa, Bridgewater, Fort Erie; and etched upon the blade are, Black Rock, March, 1813; Stony Creek, Queenstown, September, 1813; Fort George, Forty Mile Creek, Chippewa, October, 1814. On the scabbard are massive chasings, representing the battle of Chippewa and of Fort Erie; the arms of the State of Maryland, with warlike devices.

The other sword has on the hilt the following inscription:—"Presented to Captain John Gallagher of the Navy, by the State of Maryland, his native State, in consequence of his gallant services during the late war with Great Britain." The whole mountings are of gold. On the blade is an etching representing the President engageing the Endymion. The hilt bears naval devices. On the scabbard is a chased representation of the engagement between the Macedonian and the United States. Both swords are admirable specimens of workmanship.

The case of Alexander Brown & Sons, of Baltimore, for the use of Oliver, vs. Susan Decatur, was tried at Washington a few days since, and a verdict rendered for the plaintiffs. By this verdict Mrs. Decatur will have to refund the sum of fifteen thousand dollars loaned to her.

The Report of the War Department comprizes many interesting particulars respecting the army, public roads, fortifications, &c., from which we shall from time to time furnish extracts.

The returns accompanying the Report make the whole strength of the United States Army, including officers and privates, 6,597. According to the organization for 1834, it should have comprised an aggregate of 7,198. The whole number of men enlisted into the service from 1st of January to 30th September, 1834, is 2,111.

By a late official documentof the city councils of Boston; it appears that out of 2767 wells in that town, seven only furnish soft water, fit for washing.

One of 1585 of the population of France is deaf and dumb; in Russia one in 1548; in the United States, one in 1538.

The Tallahasee Floredian says, there is a person in this County, who, with the assistance of one servant, has made this season, 20 bales of Cotton, worth at present prices upwards of two thousand dollars.

In the Legislature of Missouri resolutions have been offered, prohibiting the introduction into that State of slaves for sale or hire, by others than residents, or persons about to become so, and for compelling masters to treat their slaves with humanity.

Slaves in Cuba.—In Tudor's tour in Mexico and Cuba it is stated that the number of slaves imported into the Island of Cuba since the year 1800, is upwards of two hundred and sixty thousand!

Gallantry of the Vermont Legislature.—Among the laws passed at the late session of the Legislature of Vermont, was one, exempting females from liability to imprisonment for debt.

No Bad Idea.—The Eastern nations believe that there is not a happier state of existence than that of living eternally in a delicious garden, sorrounded by beautiful women, reposing on flowers.

"Was'nt that well done," said a waterman on the Susquehanna as his raft struck one of the piers of the Harrisburg Bridge, "there's five on 'em and I only hit one."

United States frigate John Adams.—We have been repeatedly called upon since the publication of our paper on Saturday, by the friends of the surgeon of the John Adams, to know whether our translation from the French paper was correct, in which we stated that the quarantine officer placed on board of her at Toulon had died, or that of two of our cotemporaries the *Gazette* and *Commercial*, who said that the *physician* on board of her had died. We replied, and we have been requested to give publicity to the fact, in order to relieve the anxiety of the friends of the surgeon at a distance, that our translation was correct—the term used in the original being the *garde de santé*, the person employed on board each vessel to prevent a violation of the quarantine laws. It is singular that a similar error to that made by the Gazette in the morning, should have been made by the Commercial in the afternoon, but so it appears.

We are further requested to state, that the friends here of the surgeon of the John Adams have received letters from him dated Toulon the 7th November, at which time he was in perfect health.—[Courier.]

Mr Benjamin Knower, of Albany, who failed to so large an amount last spring has given notice that he is now ready to meet demands against him.

Honors to the Dead.—A writer in the National Intelligencer under this head, relates the following anecdote:—When the body of Commodore Decatur was placed in the vault of Mr. Barlow, (now Col. Bomford's) at Kalorama, and when the multitude which accompanied the funeral had dispersed, he observed a solitary individual, in a salor's dress, lingering near the place. He walked up to him, and asked him what he wanted; the sailor replied that he "only wished to look a while at the place where they had laid the *mainmast* of the Navy!" and walked off. Who could have spoken a better eulogy? It was the eloquence of nature and of truth.

A good Hall.—A short time ago a fisherman at Chalons, on casting his net into the Seine, drew up a bag containing three hundred gold medals on all of which appears the head of the emperor Titus. The fisherman cannot say with the emperor, "I have lost a day."

In 1787 Louis Phillipe, visiting the prisons of St. Michel, found in one of the dungeons an iron cage, which was reserved for state prisoners. The young Prince enraged, broke it in pieces.

SINGULAR CONSECRATION.—We learn from the Missouri Catholic Telegraph, that the New Catholic Cathedral at St. Louis, was consecrated on Sunday, October 26th, by the *discharge of Cannon and ringing of Bells!!* The same paper mentions that there were present at the consecration four Bishops twenty eight Priests, and a considerable number of young aspirants to the holy ministry.

Lamentable Suicide.—A young gentleman named Nicholson, educated at one of the English Universities, highly connected in that country, and having many respectable connexions in this city, drowned himself yesterday morning in the North River between Hoboken and Courtlandt street. He had been disappointed of his usual remittances from England, and was involved in debt to a considerable extent for board and pecuniary accommodations from friends; being a young man of a high sense of honor and very excitable temperament, had often declared that he could not survive the disparagement into which the negligence of his friends at home had thrown him with his generous acquaintance here. He purchased a phial of the sulphate of morphine in Canal street, went with some friends on an excursion in a sail boat to Hoboken, drank a large quantity of brandy and water there, and on stepping on board the boat on his return, he was observed to swallow the contents of the phial. Within three or four minutes he suddenly sprang up, uttered the words "happy nonentity," and plunged headforemost into the river. He was observed to rise once about 200 yards below the boat, and was then seen no more. Mr. Nicholson was a young gentleman of bright literary attainments, and has left in the possession of a friend manuscripts evincing great labor and genius. He had spent a handsome fortune, but his reversionary interests were extensive.—[Courier.]

After a storm, comes a calm.—A gentleman talking to a friend on the subject of his marriage, made the following observation:—"I first saw my wife in a storm; carried her to a ball in a storm; courted her in a storm; was published to her in a storm; married her in a storm; lived with her in a storm; but thank heaven, I buried her in pleasant weather!"

Pointed.—One of our late Western Exchanges says—"The eastern papers are quite barren of interesting matters. There has not been a *riot at the East for several weeks!*"

"I always think," said a reverend guest, "that a certain quantity of wine does a man no harm after dinner." Oh no, sir," replied his host, "it is the *uncertain* quantity that does the mischief."

A Frenchman, stopping at a tavern, asked for Jacob, "There is no such person here, said the landlord. "'Tis not any person want sare, but de beer, make warm wid de poker." "Well," answered mine host, "that is flip." "Aye, yes, sare, you are in de right—I mean *Philip*."

A Dog of Spirit.—A gentleman, a good shot, lent a favorite old pointer to a friend who had not much to accuse himself of in the slaughter of patridges, however much he might have frightened them. After ineffectually firing at some birds which the old pointer had found for him, the dog turned away in apparent disgust, went home and never could be persuaded to accompany the same person afterwards.

The man who would be truly happpy must besides an habitual virture, attain to such a strength of mind as to confine his happiness within himsely, and keep it from being dependent upon others.

Legal Liars.—During the discussion of a cause in which the boundaries of a piece of land were to be ascertained, the counsel, of one part stated, "*We lie on this side*, my lord;" and the counsel on the other part said, "*We lie on this*," The chancellor stood up and said, "*If you lie on both sides*, whom will you have me to believe?"

[*From the Salem Gazette.*]

MASON AND DIXON'S LINE.—Whenever the rights interests or duties of the Northern and Southern States, respectively, are in question, reference is commonly made to "Mason and Dixon's Line."—this boundary is so termed from the names—Charles Mason and Jeremiah Dixon—of the two gentlemen who were appointed to run unfinished lines in 1761, between Pennsylvania and Maryland, on the territories subjected to the heirs of Penn and Lord Baltimore. A temporary line had been run in 1739, but had not given satisfaction to the disputing parties, although it resulted from an agreement in 1739 between themselves. A decree had been made in 1682 by King James, delineating the boundaries between the lands given by charter to the first Lord Baltimore, and those adjudged to his majesty (afterwards to William Penn,) which devided the tract of land between Delaware Bay and the Eastern sea on one side, and the Chesapeake Bay on the other, by a line equally intersecting it drawn from Cape Henlopin to the 40th deg. of north latitude. A decree in chancery rendered the King's decree imparetive.—But the situation of Henlopen became long a subject of serious, protracted and expensive litigation—particularly after the death of Penn in 1718, and of Lord Baltimore in 1714; till John and Richard and Thomas Penn, (who had become the sole proprietors of the American possessions of their father William,) and Cecilius Lord Batlimore (grandson of Charles and greatgrandson of Cecilius the original patentee) entered into an agreement on the 10th of May 1732. To this agreement, a chart was appended—which ascertained the site of Cape Henlopen, and delineated a division by an east and west line running westward from that Cape to the exact middle of the peninsula.

Lord Baltimore became dissatisfied with this agreement, and he endeavored to invalidate it.—Chancery suits, kingly decrees, and proprietary arrangements followed—which eventually produced the appointment of commissioners to run the 'temporary line.' This was effected in 1739. But the cause in chancery being desided in 1750, new commissioners were appointed, who could not however, agree, and the question remained open til 1761, when the line was run by Messrs. Mason and Dixon.

Heavy Damages for Negligence.—Stilman Wooster received a few days since, in the Supreme Cour of Massachusetts, a verdict of six hundred dollars against the proprietor of the Lechmere Point Bridge, near Boston. It was an action brought to recover damages for negligence in keeping the bridge in repair, in consequence of which the plaintiff had fallen from it in the night and received injury. Judge Wilde told the jury to assess *single* damages, it being the duty of the Court to double them, agreeably to the statute. So that the defendants will be reminded to the tune of twelve hundred dollars and costs to take better heed to their ways.

The proper Sitting Posture for Females.—This question has been disputed,—one party insisting that girls should always sit erect, while others are advocates for a lounging position. It is not difficult to show that both are wrong. When a delicately formed female is supposed to be sitting erect, she is generally sitting crooked; to a superficial observer she may appear quite straight; but any one who will sit on a music stool, and endeavor to keep his body in a perpendicular line for ten minutes, will be convinced that it is difficult for even a strong man to sit as long as a delicate female is expected to do, without allowing the spine to sink on one side, or to fall forwards. The attempt to sit erect beyond a certain time is injurious: for although bending the spine occasionally is useful rather than hurtful, yet, when it is done involuntarily, and when the bend is attempted to be concealed by an endeavor to keep the head straight, there is a danger of the spine becoming twisted. Indeed, a double curve is generally the consequence: there is first a bend on one side, to give ease to the fatigued muscles; and then, to conceal this, there is a second curve, that is necessarily accomplished by a slight twist in the vertical line of the whole column. The proposal to allow the children to sit in a crooked or lounging position, seems to have been founded on the idea that all the muscles are more relaxed in this way than even when the child lies at full length on its back. This notion is certainly incorrect, and such a mode of sitting is injurious; for even were the muscles more relaxed by it, the bones and the ligaments acquire such a shape as naturally produces distortion. It may naturally be asked how a girl should sit, since it would appear, whether she is in an erect or stooping position, she is equally in danger of becoming crooked. As sitting in a manner generally recommended affords little or no support to one who is weak, the answer would be, that a delicate girl should not sit for more than five or ten minutes without having some support to her back, and when she is fatigued, that she should lie down or recline on a couch. But, as it would be very annoying to a girl not to be allowed to sit up except for a short time, and as a couch is not always at hand, we must endeavor to show how a delicate girl may remain in an upright position for a considerable time without incurring any risk of becoming crooked.—This leads to an inquiry into the merits of the chairs which are at present generally used by children.—Young ladies are often obliged, while at their music lessons, to sit upon those chairs which have high backs, long legs, and small seats. These chairs are said to have been invented by a very eminent surgeon, and are intended either to prevent distortion, by some oparation, on the spine, or as the most effectual means of supporting the body. It is difficult to imagine how a chair of this description can effect the first purpose, and to understand how far it is calculated for the second, the reader should make the experiment on a chair of the same proportion to his figure, as the chair in question is to that of a little girl. He will find that if the seat or surface on which he rests is small in proportiten to his body, the chest will, after a time, either, fall forward or to one side, unless he exert himself to a degree that is very fatiguing. Indeed, if the seat be at the same time so high that the feet do not rest fairly on the ground, but dangle under the chair, a forward position of the head is almost necessary to preserve the balance of the figure. The objection to such chairs has been met with the assertion, that girls feel remarkably comfortable in them. This is no argument in favour of their use; for it is not uncommon for a girl who has seven or eight pounds of iron strapped upon her body, and next to her skin, to say the machine annoys her so little that she does not care how long she wears it. But whether this chair is agreeable or not, it is easy to show that it is not calculated to give much proper support to the body, and that it is almost impossible for a delicate girl to sit long in a natural or easy position upon it. It may be allowed that the chair we consider the most comfortable, that is, the chair which affords the most support to the body, should, if made in proper proportions, be the best for a delicate girl. In such a chair the seat should be scarcely higher than the knees, (thus permitting the whole of the foot to rest upon the floor,) and of such a size, that on sitting back, the upper part of the calves nearly touch it. This form of seat is very different from that of the chair alluded to, the back of which is equally objectionable; for, instead of being in some degree shaped to the natural curves of the spine, it is made nearly straight, and projects so as to push the head forward. A delicate girl should always sit so as to rest against the back of the chair, and if the lower part of her spine is weak, a small cushion will afford great relief.—As it is quite a mistake to suppose that the shoulders, if raised in any other way than by the action of the muscles, or by the curvature of the spine and ribs, will continue high, there is no real objection to a girl who is delicate being supported by an arm chair; for occasionally resting on the elbows, a considerable weight is taken off from that part of the spine which is the most likely to yield. These observaions refer only to the manner in which delicate girls, whose spines are still straight, should sit; when the spine is actually distorted, it will be nccessary to use other means.—[My Daughter's Book.]

Free Negro Labor.—I have already stated, that the sugar cane is cultivated by the labor of free men in Puerto Rico; I shall now bring additional proofs to show that it is cultivated elsewhere by the same means. In the island of Margarita, formerly belonging to Spain, now forming a part of the republic of Colombia, all the sugar cane is raised by free labor; and all the sugar and molasses made, and rum distilled, are produced by free laborers. It is true that the island does not produce a sufficient quantity of these articles for its own consumption, but this does not alter the question; it yields as much, or perhaps more, at present than it did when cultivated by slaves. I speak not from hearsay: I have visited that island—I have been on every plantation—and I have observed the exertions and the industry of the free laborers. I shall only offer one example in this place in corroboration of this fact. A friend of mine, an Englishman, Doctor Emery, rented an estate in Margarita, in the year 1824, from the Colombian government; it was called the Estancia, and is situate in the centre of the island, in the valley of Paraguachi.—When the island was in possession of Spain, the estate belonged to a convent of monks; and on it were from fifty to sixty slaves. The republicans drove the monks off the island; the able-bodied slaves, in order to obtain their freedom, enlisted in the victorious army, and the estate became the property of the new government. The lands were divided among a great many poor persons, who paid a rent in kind, and the whole was rented to one person, who received the rents of the under-tenants, and paid government a certain yearly sum. One of the conditions under which the tenants held these lands was that they were obliged to sell to the head landlord, at harvest time, all the canes they might have raised, at a valution. When I visited Margarita in June, 1827, there were upwards of a hundred families living on the lands, each with a comfortable cottage, a field of cane, Indian corn, and plantains; all most carefully cultivated. They worked for a shilling a day on the property of the landlord; and the young men who had no family to support, hired themselves as laborers, by the month, for about a pound sterling. They made sugar, distilled rum, and performed all the laborious work formerly done only by slaves; thus the landlord had his cane planted and cut without any trouble, and each tenant cultivated his plot of land with care, for on his industry depended the comforts of himself and family. I have heard old and intelligent neighbors say, that the estate thus cultivated produced considerably more than when in possession of the monks and worked by slaves. All the sugar cane raised on that island is cultivated precisely in the same manner. There were six stills for making rum constantly at work, managed by free laborers, and supplied with sugar and molasses from the fields of the small tenants. * * According to a calculation which is considered to be correctly made, the island of Jamaica exported in 1823, with 342,382 slaves, 1,417,758 quintals of sugar, which was a year of great fertility in the West Indies; and Puerto Rico, with 45,000 slaves, at the highest calculation produced 414,663 quintals; therefore Jamaica, with a number of slaves nearly nine times greater, yielded only about 3 1-2 times more sugar; which clearly shows that free labor in Puerto Rico, contributes largely to produce even sugar. To the number of free laborers only can this difference be attributed, for it must be acknowledged that although the soil of Jamaica is not so fertile as that of Puerto Rico, yet the cultivation of the cane is much better understood. In the same year, the three British islands of Barbadoes, St. Vincent's and Grenada, which, with the exception of Jamaica, produce most sugar of all the British Antilles, with the labor of 128,000 slaves, yielded 794,-567 quintals of sugar; that is to say, that with more than three times the number of slaves, they produced less than double the quantity of sugar raised in one year in Puerto Rico. The same year the whole of the British West India colonies, with 627,000 slaves yielded only 3,005,366 quintals of sugar; which proves that with 15 1-2 times more slaves, they only produced 7 1-2 times more sugar than Puerto Rico. In 1821, 428,962 quintals of sugar, 20,758 quintals, 96 lbs. of coffee, and 1320 quintals of cotton, were produced in the island of Guadaloupe, by the labor of 87,998 slaves; while Puerto Rico, with about half the number of slaves, moderately worked and humanely treated, produced, besides the quantity of sugar already stated, 25,000 quintals of coffee, 34,163 quintals of tobacco, and 9166 quintals of cotton, together with cattle, pepper, rice, and many minor productions. This simple enumeration of facts is sufficient to establish the advantages arising from, and the extent of free labor in Puerto Rico.—[Col. Flinter's Account of Puerto Rico.]

Conjugal Fidelity.—The Mandarin teal, or *eeh yeong* of the Chinese, is also much and justly admired. The plumage of the drake is remarkably elegant, that of the female plain and undecorated.—The male bird, however, during four months of the year, that is, from May to August, changes its beautiful plumage, and bears a close resemblance, at that time, to the female. This change is not confined solely to the tints of the feathers, but extends even to the epidermis of the mandibles. This bird, unlike the tribe, generally roosts in elevated situations upon trees, high rocks, or over the windows of the aviary. These little creatures are regarded by the Chinese as emblems of conjugal fidelity, and are usually carried about in their marriage processions. The following curious instance of fidelity was mentioned to me, as having occurred in the instance of two birds of this species:—A drake was stolen one night, with some other birds, from Mr. Beale's aviary; the beautiful male alone was taken; the poor duck, in spite of her quacks during the distressing scene, was left behind. The morning following the loss of her husband the female was seen in a most disconsolate condition, brooding in secret sorrow; she remained in a retired part of the aviary, pondering over the severe loss she had just sustained. Whilst she was thus delivering her soul to grief, a gay, prime drake, who had not long before lost his dear duck, which had been accidentally killed, trimmed his beautiful feathers, and appearing quite handsome, pitying the forlorn condition of the bereaved, waddled towards her; and, after devoting much of his time and all his attention to the unfortunate female, he offered her his protection, and made a thousand promises to treat her with more kindness and attention than her dear, dear lost drake; she, however, rejected all his offers, having made, in audible quacks, a solemn vow to live and die a widow, if her mate did not return. From the day she met with her loss, she neglected her usual avocations; her plumage became ragged and dirty; she was regardless of appearance; forsook her food, and usual scenes of delight, where she loved to roam with him now absent, and to excite his brave spirit to drive away all the rivals that might attempt even to approach him. But those fleeting hours of enjoyment had passed, perhaps never to return; and no consolation that could be offered by any of her tribe had the least effect. Every endeavor was made to recover the lost bird, as it was not expected that the beautiful creature would be killed. Some time had elapsed after the loss, when a person, accidentally passing a hut, overheard some Chinese of the lower class conversing together; he understood sufficient of their language to find out that they said, "It would be a pity to kill so handsome a bird." "How then," said another, "can we dispose of it?" The hut was noted, as it was immediately suspected that the lost Mandarin drake was the subject of the conversation. A servant was sent, and, after some trouble, recovered the long lost drake, by paying four dollars for him. He was then brought back to the aviary in one of the usual cane cages. As soon as he recognized the aviary, he expressed his joy by quacking vehemently and flapping his wings. An interval of three weeks had elapsed since he was taken away by force; but when the forlorn duck heard the note of her lost husband, she quacked, even to screaming, with ecstacy, and flew as far as she could in the aviary to greet him on his restoration. Being let out from the cage, the drake immediately entered the aviary—the unfortunate couple were again united; they quacked, crossed necks, bathed together, and then are supposed to have related all their mutual hopes and fears during the long separation. One word more on the unfortunate widower, who kindly offered consolation to the duck when overwhelmed with grief; she in a most ungrateful manner informed her drake of the impudent and

gallant proposals he made to her during his absence. It is merely supposition that she did so; but at all events the result was, that the recovered drake attacked the other, the day subsequent to his return, pecked his eyes out, and inflicted on him so many other injuries as to occasion his death in a few days. Thus did this unfortunate drake meet with a premature and violent death for his kindness and attention to a disconsolate lady. It may perhaps be correctly written on a tablet over his grave, "*A Victim to conjugal fidelity.*"—[Bennet's Wanderings.]

Clubs in London.—In 1800 it was remarkable that London had scarcely any hotels, while all other cities were full of them; now almost every second house in the streets below Grosvernor-square is an hotel. Clubs were rare, and used by no means as clubs are now; White's, as old as Hogarth's time—Brookes's and Boodle's—The Cocoa Tree, Graham's, and another, were all. The Union, which existed within this century, was a regular gaming club, and was held first at what is now the Ordnance Office, Pall-mall, and subsequently in the house now occupied by the Bishop of Winchester, in St. James's square; but all these were clubs of recreation and amusement, of conversation or dissipation. Now see the difference. Crockford's, with the best cook and coffee room, rears a splendid front, and well may, for its members are of the first class, and the aspersions cast upon it of the falsest character. The Traveller's is a magnificent house; they play high in the evenings, but no game of chance that we know of.—The Junior and Senior United Service clubs—invaluable institutions—where our gallant defenders are enabled, upon their shamefully small half pay, to enjoy the comforts and luxuries they have so gallantly earned, at an easy rate. The Union, a resort of wealthy citizens, who just fetch Charing-cross to inhale the fresh air as it draws from the Park through the funnel by Berkeley House, out of Spring Gardens, into their bay windows; and the Athenæum, where the mixture of Whigs, Radicals, savans, foreigners, dandies, authors, soldiers, sailors, lawyers, artists, doctors, and Members of both Houses of Parliament, together with an exceedingly good average supply of Bishops, renders the melange very agreeable, despite of some two or three bores who "continually dine," and who, not satisfied with getting a six-shilling dinner for three and sixpence, "continually do complain." Then there is the Wyndham Club held at Lord Blessington's house, in St. James's Square, and called after Lord Nugent, who founded it; the two University Clubs; the Clarence, mischievously called the Clearance, because it was established upon getting rid of some disagreeable members; and the Oriental Club, which, as its name implies, consists of the curry and rice gentlemen from India, with their calico shirts and limber legs, and which the young women who sweep the crossing at Tenterden street (where, *par parenthese*, there has been within this century founded a Royal Academy of Music) invariably call the Horizontal Club. All these places—and there are one or two others, especially one called the Garrick, near Covent Garden, and another in Broad-street, called "the City"—have been established upon a principle of economy, and on a scale of comfort and elegance which would have sounded like Hebrew to the unaccustomed ears of the world of 1800. The Carlton Club we have not noticed, because its splendid house in Pall-mall remains unfinished, owing to, what certainly was not known in 1800, a strike amongst the unionists. However, the Carlton is altogether a superior body, and ranks with, and perhaps above, the original White's, Brooke's, and Boodle's.—[New Monthly Magazine.]

Different Species of Egg.—The contents of these five eggs are exactly similar, with the exception of a slight difference in that of the crocodile, but slight indeed compared with the difference of the animals produced therefrom. In looking at the first egg, "could imagination," to use the words of Dr. Drummond, "ever conjure up, even in the brightest moments of inspired genius, the idea of a peacocks springing out of the shell; yet the peacock, in all the glory of dazzling colors, is the product of a little glairy fluid contained in a capsule of chalk, and in no wise different, so far as we can perceive, from what produces a barn door fowl. Has not the hand of Divinity here written, almost without a metaphor, in letters of gold, the wonders of its creative power? Look at a single feather of the peacock; consider that its shining metallic barbs, its superlatively beauterful eye, and all the wonders it exhibits of iridescent, rich, and changeable hues, according to the angle in which it lies to the light; that its form, its solidity, its inflexibility, its strength, its lightness, and all its wonders (for in the eye of intelligence every part is a wonder,) had their origin in a little mucilage; and then consider whether, in looking on such an object, we should be content with thinking no more about it than simply that it is a peacock's feather. Yet this is too much the practice. Above us, and below: on the right side, and on the left; in every element, in every situation, the works of Almighty Power are present, and all abounding in instruction of the highest kind; and that they make not the impression they should do upon us is chiefly owing to the extraordinary anomaly, that natural history forms no necessary part of the education of young or old. But if a single feather be so wonderful a production, what are we to think of the single bird." And what are we to think, I may add, of the wonderful difference between two birds, a peacock and a peahen, produced from eggs so like that the eye cannot distinguish them? Yet the peacock is furnished with a magnificent and gorgeous tail, while the pea-hen is arrayed in plain and unobtrusive colors. The second egg, which is not quite so much bulged out at the larger end, and is rather paler in color, produces the common stork, a bird very different indeed in form and in color from the peacock. The stork also feeds on frogs and garbage, while the peacock lives chiefly on grain, and in a wild state on pepper. The third egg, which is rather less taper at the small end than that of the stork, and at the same time whiter, produces the common goose; while the forth egg produces the common eagle of this country, distinguished when full grown by its white tail. No two birds could differ more than the goose and the eagle in their dispositions and mode of life, even from the very moment they are hatched. The young gosling the moment it is out of the egg, can run about and feed itself with the utmost ease and agility; while the young eaglet is blind and helpless, and must be fed for many days by its parents. The gosling will plunge fearless into the first water it sees, and will swim about as dexterously as its dam, but if an eaglet were put into a pond it would inevitably be drowned. The goose feeds on grass, while the eagle would starve rather than swallow a mouthful of it: Spallanzani could not even by an art compel an eagle to taste bread, though a goose would consider this the greatest dainty it could have. Yet the egg of the goose is very similar in all respects to the egg of the eagle, and their slight difference would not be readily detected except by a naturalist who had paid attention to the subject. The fifth egg, which produces a crocodile, though nearly of the same size as the other four, differs from them all in a few particluars, which, however, seem of too small importance, so far as external aspect goes, to indicate the extraordinary difference of the reptile from the birds. "An egg of a crocodile of fourteen feet long," says Count Lacépede, "killed in Upper Egypt in the act of laying, is preserved in the Cabinet Royale at Paris. It is whitish and of an oval figure, covered by a shell similar to that of a pullet's egg, not quite so hard, but the film or membrain lining the shell is thicker and stronger. The long diameter is two inches five lines, and the short diameter one inch eleven lines." There is within the egg a yolk and a white, as in the eggs of birds; and "if broken into a bowl," says Dr. Drummond, "no eye could perceive the difference." The young crocodile, like the gosling takes to the first water it can find; but, instead of living like the fowl, on plain vegetable diet, it prays upon every living thing it can master and devour. Though the crocodile's egg also, as we have just seen from Lacépede, is similar in size to that of the goose (some are said by M. Bory de St. Vincent to be twice as large) the crocodile hatched from it often grows five times the length of a man, with a body as thick as that of a horse, and consequently many times the size of any of the birds produced from the other four eggs.—[Renorie's Alphabet of Natural Theology.]

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

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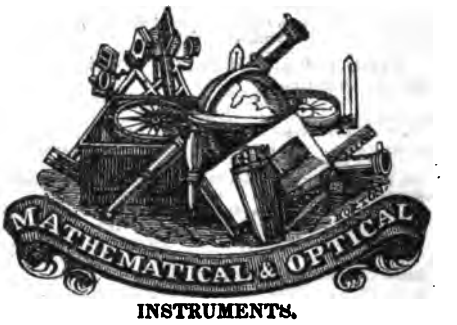

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To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable

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JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24

MECHANICS' MAGAZINE.

THE NOVEMBER NUMBER is now ready. It contains Judge Baldwin's Address before the American Institute, verbatim, corrected by himself; a supplemental account of articles exhibited at the Fare, and a great variety of interesting scientific intelligence, both American and European.

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☞ Catalogues may be had at the Store; if sent for by mail will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications to wit:—NEW YORK FARMER and American Gardener's Magazine; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 347 *North Market street, Albany*. tf

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few setts wanted, the chills and patternsare to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.
Troy N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 229 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

j23 1am H. BURDEN.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.
December 3d, 1833.

For further information on this subject see No. 49, pg 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of	1 inch by	½ inch,	*Flat Bars* in lengths of 14 to 18 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.
200	do. 1½	do.	¾ do.	do.
40	do. 1½	do.	½ do.	do.
800	do. 2	do.	½ do.	do.
800	do. 2½	do.	½ do.	do.
soon expected.				

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2½, 2⅝, 2¾, 3, 3½, 3¾, and 3¾ inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71mcowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

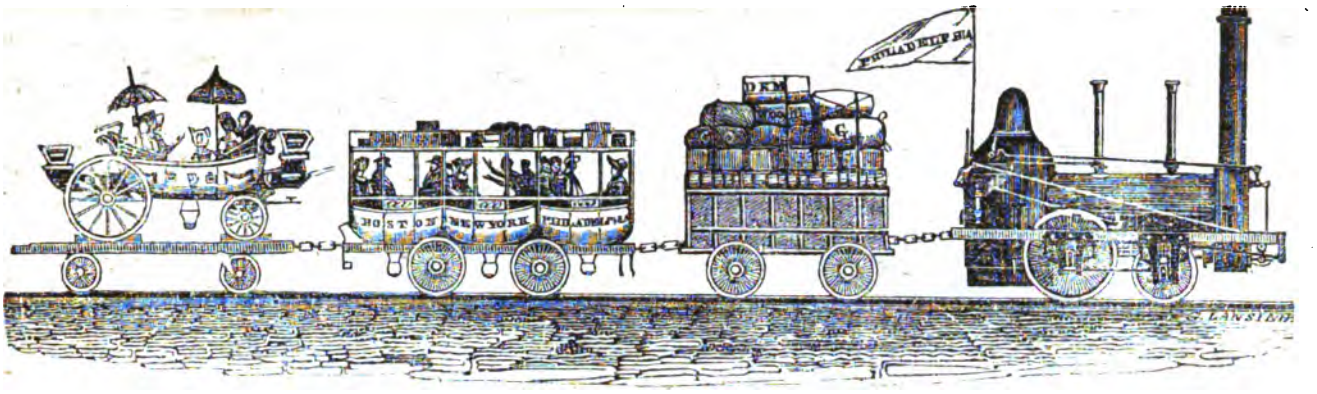
Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad. Germant. and Norrist. Railroad.

m1 1y



AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, JANUARY 3, 1835. [VOLUME III.—No. 52.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JANUARY 3, 1835.

With this number closes the *third* volume of the Railroad Journal; it may not therefore be improper to take a retrospective view of the short period of its existence. When the first number of the Journal was issued, January 1, 1832, how few railroads were in use in this country, and how little was known about them except to engineers, and even to them, except from books. But now there are railroads in use in at least 12 States of the Union, and in several others they are in a great state of forwardness, so that we may with confidence look for their introduction into every part of the country. Here, even as in England, those who were a short time since strongly opposed to them, are now warmest in their favor, and thousands are striving to bring them to their doors, even though it should require stationary power. Railroads, indeed, are now almost as common as *good* turnpikes, and will soon be much more so—whilst thousands consider themselves competent to survey, construct, and superintend them when made—and any person can obtain descriptions of the mode or modes in which almost any road in the country is built, together with the various modes of using them, their cost, expense of working, and income—as well as much useful information relative to the machinery, and the latest improvements in the construction, both of road and machinery—and all for the low price of twelve dollars—*simply by taking a complete set of the* Railroad Journal, *including* the ensuing year.

We do not mean, however, to say that the *Journal* has produced all this; by no means—but the reverse—it is the Railroad System which has made the Journal what it is. Yet we may, we think, without fear of contradiction, say that much useful and important information has been collected, embodied, and preserved by the Journal, and that it now contains a larger mass of useful information upon the subject of railroads, railroad machinery, &c., than can be obtained elsewhere in the country for the same amount of money. But in order to make it what it is, and *is to be*, it has cost us more money than it has produced in return—a circumstance occasioned by the following causes, viz.: 1st, the printing of a much larger edition than has been subscribed for; and 2d, the great extent of country over which its subscribers are scattered, and of course the difficulty and expense of making collections, together with the delay of some to pay up their subscription.

By way, therefore, of guarding against those difficulties hereafter, we shall adopt the following measures: Print a less number, and thereby reduce the expense, and at the same time make an *additional* charge of *one* dollar to those who do not pay according to the terms, *in advance*. In order, however, that every subscriber who now takes it may have time to understand the adoption of this measure,—and it is only adopted from necessity, as we have to pay interest upon every dollar not paid in advance,—and to remit the amount by mail or otherwise, we say to those living at a distance, if paid by the first of *March*, it will be considered in advance. To all out of the city, who have not *already* paid for the 4th volume, bills will be sent with the Index to the last six months, and No. 1 of Volume IV. To those in the city, bills will be presented personally, and it is confidently believed that every subscriber will evince his desire to see the Journal continue and prosper, by paying the amount.

To all who do not thus *by the 1st of March*, pay in *advance*, the bills will be made out at FOUR DOLLARS per annum, and all subscriptions received hereafter not paid *in advance*, will be charged at FOUR DOLLARS per year.

This measure is adopted only to ensure the continuance and success of the publication, and in justice to those who have always paid in advance, thereby enabling us to continue the Journal to this period, and it will be *strictly* adhered to.

Remittances by mail—through the hands of the Post-Master—will be at *our risk*. Receipts will, in *all* cases, be returned immediately.

☞ Subscribers who wish to *supply* deficient numbers of the 1st, 2d, or 3d Volume of the Journal, will please give early notice, that we may supply them *as far as possible*. The deficiencies can be better supplied *now* than hereafter.

In this number, page 820, will be found a description, with several engravings, of Mr. Stephenson's improvement in the railroad chair. It is, we should think, too complicated, and must therefore be too expensive for general use in this country. It may be improved upon by Yankee ingenuity, so as to answer a good purpose.

We should like exceedingly well to see the views of A. B. C. carried out in relation to a publication similar to the one to which he alludes. But we cannot with the Journal depart so far from our original plan—we hope, however, to render it more interesting than heretofore.

We have received the Report of the Internal Improvement Convention, recently held at Baltimore, which we shall publish as soon as we have disposed of other interesting matters previously in hand.

In our next number we shall give the last report of the Directors and of the Engineer, H. Allen, Esq., of the South Carolina Railroad Company, for the six months ending 31st of October last. This report is highly favorable, showing a fair increase of business, and a constant improvement of the moving power and machinery, as well as improvement of the road, by embanking where it was built on piles. The prospects of this road, notwithstanding it has cost much more than it was at first estimated at, are very fair. It must eventually be a great thoroughfare—and will become very valuable to the stockholders.

A Short Account of the River Richlieu, from Lake Champlain to Sorrel, in connection with the Chambly Canal. [For the Railroad Journal.]

The river Richlieu, which connects Lake Champlain with the St. Lawrence, is a fine stream, varying in breadth from five to sixteen hundred feet. Its precise length is not easily determined, since it is difficult to say where the lake ends; it may, however, be called about eighty miles long. From the lake to the village of St. John's, on the west bank, and that of St. Athanass, on the east, the distance is twenty-four miles, the whole of which, at all seasons, when not obstructed by ice, is navigable for vessels drawing six feet water.

The next twelve miles are chiefly rapid, making a fall of about seventy-eight feet, (in the whole distance,) into a very beautiful and natural basin, of about two and a half miles* in breadth and three long; on the west bank of which is situated the village of Chambly, distant from Montreal, in a direct line, about thirteen miles.

The remaining forty-two miles, (where the waters of the Richlieu and St. Lawrence join at the village of Sorel, or William Henry,) can, with a trifling expense, be made navigable for vessels of the same draft as the river will admit of above St. John's.

To overcome the difficulties occasioned by the twelve miles of rapid, the Chambly canal was projected; and as it has not appeared in your account of North American canals, it has probably never been heard of by you, I therefore take the liberty of sending you the following sketch to complete your list.

It is one of the largest class of canals, and though economy has been a point attended to, the work has still been carried on with due attention to beauty as well as strength.

The canal and harbor, connected, is twelve miles long, commencing at the village of St. John's, and ending at the Chambly basin. Its width is thirty-six feet at the bottom, sixty feet at top water line, and six feet water will be had in it at all times. The locks are of cut stone, one hundred and twenty feet by twenty-four in the chamber. The bridges all swing or draw.

The canal commences by a wier of stone, sixteen hundred feet long, forming one side of a basin two hundred and fifty feet wide at the entrance, and nearly five hundred feet just within it, narrowing down to canal width, (60 feet,) at the lower end. One side of this basin is to be wharved up, and a street of sixty feet wide made, the materials for which are ready, and the work in progress.

At the end of this basin the rapid commences, and the banks are carried up fifteen feet high, to keep out floods. The guard lock, nine hundred feet from the entrance of the basin, is of stone, cut very smooth, and about the same dimensions as the other locks.

From this lock, three miles down, the bank falls with the river surface from fifteen to nine feet high, and from hence runs some distance across the river to an island near the west shore, forming a dyke, which, with a similar one at the foot of the island, about two miles and three quarters distant, gives, at a trifling expense, a natural canal of eight hundred feet wide, and twenty deep.

The canal from this to Chambly, except a half mile, made under a high bank in deep and rapid water, with a half mile of deep cutting through rock, follows a beautiful table land to Chambly, keeping from the river, and on the same level with St. John's.

Nine locks here come together within a mile, six of them are in a straight line, at short distances apart; the remaining three are combined. Four of these locks are built, and the materials for the rest are on hand.

Nearly four miles of this canal are made in the water, and part in very deep rapid water. A great deal of pumping has been necessary; the screw pump has been exclusively used; and the ease and comfort with which the excavation has been done, for long distances, six feet below the surface of the river, would surprize any person who has not seen it. The water work seemed but little more trouble than that on dry land, except the pumping. The banks, when made in the river, are well protected by a slope wall. It has been navigated, with four feet water, for ten miles of its length, during the fall; and nearly all the stones, put in the locks, have been brought to Chambly by the canal, having been reshipped from vessels which brought them from quarries thirty miles from the head of the canal.

The work was estimated, with locks of a smaller size, to cost $240,000; the actual cost will, however, fall short of $200,000, if nothing unforeseen occurs. The low prices of labor and stone-cutting, and the favorable nature of the ground, afford vast facilities for such an undertaking.

The Canadian French are equal to any masons and stone-cutters on the continent, for the beauty and excellence of their workmanship, and I think few are superior to them anywhere.

The Chambly canal, when complete, will open a communication for large vessels from the ports on lake Champlain to all the line of the St. Lawrence, and thence to the sea. If the northern canal was larger, schooners from Quebec could, by an inland navigation, visit the Chesapeake.

The Richlieu, below Chambly, is to be improved by a lock and dam. Examinations and reports on it have been made by an engineer. Part of the money has been voted by the Assembly for constructing the works. More, however, is still required, and some alterations in the law relating to the river, before the commissioners can proceed with their improvements. H.

* Can this be true?

Undulating Railways.—Is not this subject of sufficient importance to induce the trial on a road two or three miles in length, by some of the railroad companies in this country?

Boston, 14th Dec., 1834.

To the Editor of the Railroad Journal.

Sir,—Your correspondent, Mr. Thomson, recalls our attention to the Undulating Railway System. Mr. T. states that Mr. Badnall's experiments would prove too much. I do not exactly perceive this. Mr. Badnall, I believe, asserts, and, as some think, proves, that, over a certain distance of road, a carriage can be moved with less expense of power, where the profile on that distance is undulating, than when it is perfectly straight; but he does not assert that it can be moved without any exertion of power.

A pendulum will vibrate equal distances on either side of a vertical line drawn from its axis. A carriage, on an undulation, will exhibit the same result, minus the friction; but this friction may be more than overcome by the action of the accompanying engine, both during its ascent and descent of the two sides of the undulation. And, if the power of an engine were unlimited, it would be easy to conceive how the velocity of a carriage would be accelerated over a series of undulations progressively, *ad infinitum;* but as there is a limit to the power of the engine—a velocity when it will become of no effect—so there is a maximum of speed or effect in the system. A progressive additional velocity, it is easy to perceive, could only be acquired by a capability in the machine of the exertion of a progressive additional power. When the salt has become of non-effect, or, rather, when its effect is merely sufficient to counterbalance the retardation caused by friction, the speed of the whole machine must have attained its limit. I say thus much on behalf of Mr. B.'s experiments, and not in behalf of his system, the theory of which, I am free to say, I do not precisely comprehend; but, admitting it to be true—admitting Mr. B.'s theory to be perfectly correct—is it available in practice? Is it safe to admit, at any time, of a speed of more than 30 miles an hour; and is it, at any time, advisable to allow of more than 20? Would we not prefer a *sufficient* road, over the whole extent of which we had an entire control, to a more perfect one, over which, when once in motion, we must necessarily be carried forward, (without power of stoppage, consistent with the benefits in dispute,) and where we can only command certain points, viz., the tops of the undulations? And, finally, is it at all certain that the expense of grading a series of undulations so as to conform correctly to the theory, would not be equal to the present antiquated method, which, as it does not *insist* on undulations, should be able to conform fully as nearly to the natural surface?

Every individual railroad may be considered as an individual piece of machinery. Should any accident occur, we want to have the power to remedy it as quickly as possible; should any car of a train get off the road, we want to stop that train immediately; should any wheel break, or axle bend, we want to throw out the damaged waggon; should there be any unexpected obstacle on the road, we want to be able to "pull up" till it is removed. But, if a train were moving at full speed down one of Mr. B.'s undulations, under such circumstances, blowing, and puffing, and straining, to acquire power for the ascent, the destruction would be tremendous. Wo to the unhappy passengers who might form part of it! I certainly agree with Mr. Cheverton—some of whose very excellent letters you have quoted from the London Mechanics' Magazine; that, viewing it practically, the system is very replete with absurdity. I have not time to say more.

Very respectfully, S. D.

On the Location of Railroad Curvatures; being an Investigation of all the Principal Formulas which are required for Field Operations, in laying Curves and Tangent Lines, to pass through Given Points. By J. S. Van De Graaff. Continued from page 660.

[For the American Railroad Journal.]

Example 3. Let the relative positions of the origins and tangent lines be such as is indicated by figures 3 and 4, the primitive origin being

Fig. 3.

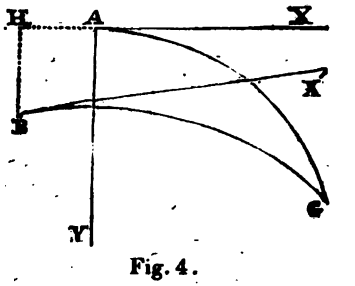
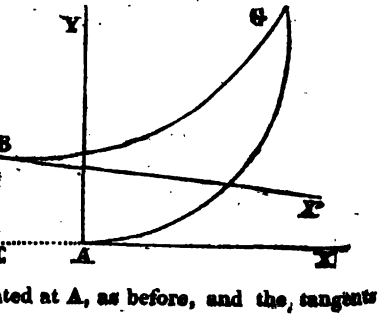


Fig. 4.



represented at A, as before, and the tangents

$\frac{10\times\cdot98481+20\times\cdot17365}{100+400}=\frac{9\cdot84810+3\cdot47300}{500}=$

$\frac{13\cdot32110}{500}=\cdot02664$; or, $T'=1°\ 31\frac{3}{4}'=$ modulus of curvature, which would trace either of the curves, in figure 3 or figure 4, from the *new origin* B to the designated point G.

Example 4. Suppose the relative position of the *new origin* to be such as is represented by figure 3, or figure 4; and let the two tangents AX and BX′ *diverge* in advance.

Taking the signs which appertain to this case, the following values will obtain: $\propto=+3$, $B=-2$, and $z=+10°$; and consequently

$$\text{Sin. } T'=\frac{\overline{12-2}\cdot\text{Cos. }10°-\overline{17+3}\cdot\text{Sin. }10°}{\overline{12-2}|^2+\overline{17+3}|^2}=$$

$\frac{9\cdot84810-3\cdot47300}{500}=\frac{6\cdot37510}{500}=\cdot01275$; or, $T'=0°\ 43\frac{3}{4}'=$ new modulus of curvature which would be required in either of the figures 3 or 4, upon the supposition that the tangents AX and BX′ *diverge* in advance.

Example 5. Let figures 5 and 6 show the

Fig. 5.

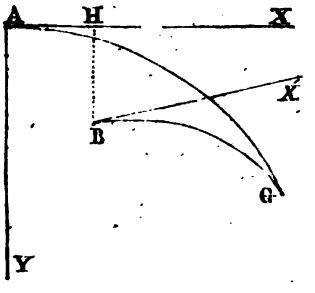
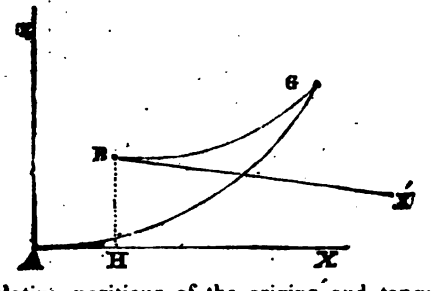


Fig. 6.



relative positions of the origins and tangent lines, as occurring in two different instances; the tangents being represented *converging* in advance.

Here the following values will obviously obtain with reference to either of the figures 5 or 6; that is, $\propto=-3$, $B=-2$, and $z=-10°$. Therefore,

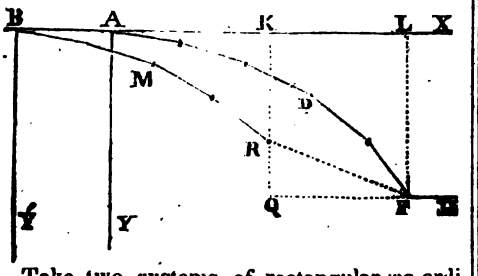
$$\text{Sin. } T'=\frac{\overline{12-2}\cdot\text{Cos. }10°+\overline{17-3}\cdot\text{Sin. }10°}{\overline{12-2}|^2+\overline{17-3}|^2}$$

$=\frac{9\cdot84810+2\cdot43110}{296}=\frac{12\cdot27920}{296}=\cdot04148$;

or, $T'=2°\ 22\frac{3}{4}'=$ required modulus of curvature.

The preceding examples do not exhibit all the mutations which will sometimes occur in (XXII) —but are sufficient to explain the principle. The importance of that formula in the field rendered such explanations necessary, in order that those persons who may not be already familiar with that elementary principle of analytical geometry, may nevertheless be enabled to compute without perplexity or liability to error.

23. Suppose ADF to represent a given curve, and BMR another proposed curve laid upon the same tangent line AX, and let $\propto$ denote the given distance AB, between their origins. Take T and T′ to represent the given moduli of curvatures, and n, and m, the given number of chains contained in each curve respectively. It is required to determine the distance FR, between the extreme stations of those two curves; and it is also proposed to show a method by which the instrument may be directed into the line FR, from the extremity of the given curve ADF.



Take two systems of rectangular co-ordinate axes, AX, AY, and BX, BY′, corresponding with the common tangent line AX, and whose origins coincide respectively with the origins A and B of the two curves. Taking x, y, to denote the co-ordinates AL, LF, of the extremity of the given curve ADF, their values will be either known from (VII.), or determined in the field by means of a system of rectangular lines. Let x', y', be the co-ordinates, BK, KR, of the extremity of the proposed curve BMR, as estimated agreeably to the proper axes BX, BY′. The differences, KL, RQ, of co-ordinates, will then be expressed by $x+\propto-x'$, and $y-y'$, respectively. Hence, taking w to denote the distance sought, the common principle of analytical geometry gives the following formula:

$$w=\{\overline{x+\propto-x'}|^2+\overline{y-y'}|^2\cdot\}^{\frac{1}{2}} \quad \text{(XXIII.)}$$

And thus the distance w becomes known; for the values of the co-ordinates x', y', will be expressed as follows:

$$x'=\frac{\text{Sin. }2mT'}{2\text{ Sin. }T'}$$

$$y'=\frac{1-\text{Cos. }2mT'}{2\text{ Sin. }T'}.$$

Now, in order to determine a method of directing the instrument into the line FR, when placed at the given station F, let FH be a line whose direction is parallel to the axis of x, and whose position is in *advance* of the station F, with reference to the origin A, upon the axis AX. The instrument may then be directed into the line FH, either by means of (IV.), or by the principles contained in Art. 16, agreeably to the circumstances of the case. Take, therefore, the letter P, to denote the angle of position HFR; and when its value has been computed, by a method which will be presently shown, deflect the angle HFR = P, and the instrument will indicate the required direction FR. And thus the position of the station at R will be seen at once, without actually tracing the proposed curve BMR.

The value of the angle P is now to be investigated. By plane trig. Rad.: Sin. QFR :: FR : RQ; and, also, Rad. : Cos. QFR :: FR : FQ. That is, Sin. $QFR=\frac{y-y'}{w}$, and Cos. $QFR=\frac{x+\propto-x'}{w}$. But, agreeably to the principles of trigonometry, Sin. P = Sin. QFR, and Cos. P = — Cos. QFR. Hence the following formulas are the obvious result:

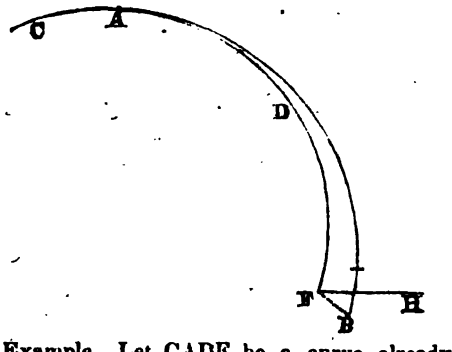
$$\text{Sin. P}=\frac{y-y'}{w};$$

$$\text{Cos. P}=\frac{x'-x-\propto}{w}. \quad \text{(XXIV.)}$$

It will require a reference to both of the expressions (XXIV.), to determine the magnitude of the angle P, although one of them will be sufficient in finally making the computation. In this inquiry, the *signs* of the various quantities must be particularly observed in the following manner.

The quantity $\propto$ is considered positive when the given origin A is in *advance* of the proposed origin B; and consequently, *in a contrary case*, the quantity $\propto$ must have its sign *reversed* in (XXIII.) and (XXIV.). The angle P is supposed to be measured from the station F, and from the line FH, in a direction increasing from *right to left*, with reference to the line FH, through all four of the quadrants. By observing this principle, the position of the line FH, under all circumstances, will be immediately known from the *signs* of the quantities Sin. P and Cos. P. Thus, when Sin. P and Cos. P are both positive, the line FR will be situated in the first quadrant; when Sin. P is positive, and Cos. P negative, then is the line FR posited in the second quadrant; when Sin. P and Cos. P are both negative, then will the line FR fall in the third quadrant; and lastly, when Sin. P is negative, and Cos. P positive, then will the situation of the line FR be found in the fourth quadrant.

The following example will illustrate the utility of (XXIII.) and (XXIV.)



Example. Let CADF be a curve already traced from a modulus of curvature of 2° 30′, and let A be a station in that curve 30 chains from the extreme station at F. Supposing a change of curvature to be made at A, such as to trace the curve AR, for a distance of 30 chains, from a modulus of curvature of 2° 28′, it is proposed to know how far those two curves would be separated from each other at their extremities; and it is also required to designate a line immediately from the extremity of the given curve, as already laid, to the point where the proposed curve would terminate.

In this case, then, $\propto=o$, $n=m=30$, T = 2° 30′, and T′ = 2° 28′. Hence, $2nT=150°$, $2mT'=148°$; and therefore, by (VII.),

$x=\frac{\text{Sin. }150°}{2\text{ Sin. }2°\ 30'}=\frac{\cdot50000}{\cdot08724}=5\cdot731$; $y=$

$\frac{1-\text{Cos. }150°}{2\text{ Sin. }2°\ 30'}=\frac{1+\cdot86603}{\cdot08724}=\frac{1\cdot86603}{\cdot08723}=21\cdot399$;

$x'=\frac{\text{Sin. }148°}{2\text{ Sin. }2°\ 28'}=\frac{\cdot52992}{\cdot08608}=6\cdot156$; $y'=$

$\frac{1-\text{Cos. }148°}{2\text{ Sin. }2°\ 28'}=\frac{1+\cdot84805}{\cdot08608}=\frac{1\cdot84805}{\cdot08608}=21\cdot469$.

Wherefore, $x+\propto-x'=5\cdot731-6\cdot156=-\cdot425$; $y-y'=21\cdot389-21\cdot469=-\cdot080$; and

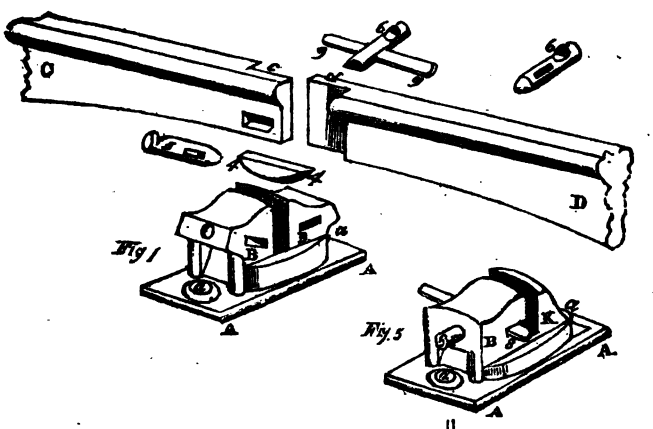
$w=\overline{-\cdot425}|^2+\overline{-\cdot080}|^2|^{\frac{1}{2}}=\overline{\cdot1806+\cdot0064}|^{\frac{1}{2}}$

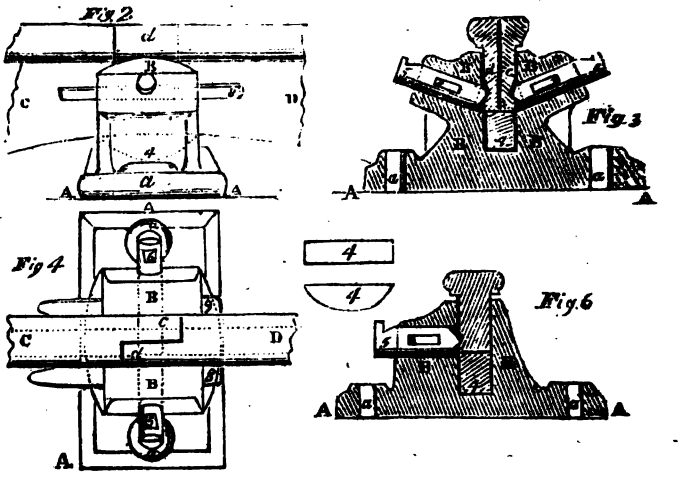
$=\cdot1870|^{\frac{1}{2}}=\cdot433$ of a chain = required distance FR. In this example, the position of the line FH, which is parallel to a tangent at A, must be obtained agreeably to the method explained in Art. 11; and then, Sin. $P=\frac{y-y'}{w}$

$=\frac{-\cdot080}{\cdot433}=-\cdot1848$; Cos. P. $=\frac{x'-x-\propto}{w}$

$=\frac{+\cdot425}{w}$. Here, Sin. P is negative, and Cos. P positive; and consequently the angle P falls in the 4th quadrant; that is, from Sin. P = — ·1848, I find, P = 349° 21′, which is the value of the *exterior* angle HFR; and therefore deflect the *interior* angle HFR equal to 10° 39′, and the instrument will then show the required direction of the line FR.

New Gold coinage.—The total amount of the new emission of gold coinage, coined since the 1st of August last up to the 6 h inst. is *three million two hundred and forty eigh tthousand, eight hundred and ninety dollars!*





Specification of the Patent granted to ROBERT STEPHENSON *the Younger, for an Improvement in the Mode of Supporting the Iron Rails for Edge Railways.*—Sealed December 11, 1833.

My said improvement in the mode of supporting the iron rails for edge railways, relates to the construction of the chairs, or iron supports, in which the iron rails for edge railways are to be seated and fastened, and which chairs are to be firmly bedded and spiked down upon stone blocks, or upon wooden sleepers, or cross bearers in, the manner now usually practised for the ordinary chairs of edge railways; and the object of my said improvement is to provide firm and secure bearings at the bottoms of the notches in the chairs for the rails to rest upon, those bearings being capable of self-adjustment, in order that they may adapt themselves correctly to the under parts of the rails; and adequate provisions being also made for fastening the iron rails securely downwards upon such self-adjusting bearings, as well as for confining the rails laterally within the notches in the chairs, but in such manner that the said self-adjusting bearings will not be subject to be deranged, or the said fastenings to be loosened, by the effect of any such slight tilting or inclination of the chairs in the direction of the length of the rails as may result from partial or unequal subsidence of the ground beneath the stone blocks or wood sleepers, upon which the chairs are fastened, nor by the effect of any such slight elongations and contractions in the length of the rails as they are usually liable to from ordinary changes of temperature. And my said improvement consists in the application of a self-adjusting segmental bearing-piece into a suitable cell at the lower part or bottom of the notch in each chair, in order to form a bearing-surface for the rail to rest upon, the said segmental bearing-piece being in the form of a segment of a circle, and lodged with its convexity or circular arch of the segment downwards within the cell, which is of corresponding concavity, and excavated below the usual level of the bottom of the notch in the chair; the flat side or chord of the said segment being uppermost, and forming the bearing-surface at the bottom of the notch in the chair; upon that bearing-surface the underside of the iron rail is to rest, and the said bearing-surface will always accomodate itself to the said under side of the rail, so as to form an even contact therewith, in consequence of the lower convex part of the segmental bearing-piece assuming a suitable position within its cell, whereby the said uppermost or rail-bearing surface of the said segmental bearing-piece will always preserve its conformity to the under side of the rail, although the chair itself in which the said bearing-piece is applied, should come to tilt or incline in the direction of the length of the rail in consequence of unequal settlement of the ground in which the stone block or the sleeper is bedded. And in order to fasten the rails securely downwards upon my said segmental bearing-pieces, as well as to confine the rails laterally within the notch of each of the chairs, the parts with which each chair is provided for the purpose of such fastening, must take its (or their) hold of the rail (or of the rails) at or very near to the centre of the circular curvature of the said segmental bearing-piece, and of the cell wherein the same is lodged, because a settlement or tilting of the chair, and the corresponding self-adjustment of the segmental bearing-piece in its cell, as aforesaid, will not have any material tendency to loosen or interfere with the holding-down action when the same is applied at or very near to the centre, about which the motion attendant on the said adjustment will take place. And further, the said holding-down action, which is to be applied, as aforesaid, by taking hold of the rail or rails at or near to the said centre, must take that hold in such manner as will permit of slight elongation and contraction of the rail or rails, in the direction of their length, without relaxing the effort of the holding-down action, or displacing the point of action thereof away from the said centre. And likewise, the same parts which perform the holding down must effect the lateral confinement of the rails within the notches of the chairs, and must also retain the rails edgeways upwards, in a proper position for the wheels of railway carriages or of locomotive steam engines to travel upon them. The mode of holding down and fastening the rails upon my said segmental bearing-pieces, which I recommend for the fulfilment of the aforesaid conditions, is by the application of cylindrical centre-pins of iron, which are fitted into corresponding sockets formed through the cheeks or sides of the notches of the chairs, so as to be firmly held in a horizontal direction, or nearly horizontal, and crossways to the direction of the length of the rails, and which cylindrical pins terminate with obtuse conical points at those ends which project from the sockets into the notches of the chairs, and the said points enter into oblong or grooved recesses, which are formed in the upright sides of the under part of the rails, suitably for the reception of the said points, the oblong elongation of the said grooved recesses being in a longitudinal direction along the rails, each of the said cylindrical pins is transfixed by a tapering or wedge-like key, which is inserted horizontally through a suitable mortice opening in the cheek or side of the chair, so as also to pass crossways through a suitable mortice opening across the cylindrical pin, at right angles to the length thereof, and in a direction parallel to the length of the iron rails. The said tapering key being so applied in its mortices through the cheek of the chair and through the cylindrical pin, that when the key is driven in through its mortices, the cylindrical pin will be forced forwards endways with its conical end or point in contact with the rail, in consequence of the tapering form of the wedge-like key, and the conical end of the cylindrical pin being by that means forced into the aforesaid grooved recess in the rail, that conical end will bear on the lower part of that recess, with an oblong bearing-down action, which will jamb the rail downwards upon its self-adjusting bearing piece, at the same time that it confines the rail laterally within the notch of the chair. And, note—those chairs which are to receive and support the extremities of the several lengths of iron rails at the junction of those extremities, require to be provided with two of the aforesaid cylindrical pins and wedge keys, in each chair, namely, one cylindrical pin through each cheek or side of the notch in the chair, with the conical points of those pins directed towards each other. The extremities of the lengths of iron rails may be united by what are called scarf or half-lap joints, which apply flatwise to each other, side by side; and the double, or over-lapping parts, at the ends of two adjoining rails, being included within the notch in the same chair, the conical points of the two opposite pins of that chair are both to be forced forwards, by their respective wedge-like keys, into the grooved recesses aforesaid, which are made at the outside of each the two halves of the half-lap or scarf joint, by which means the pressure occasioned by the wedging up of the two

pins will hold the said two halves firmly together, at the same time that the action of each of the conical points of the pins within its own grooved recess in one half of the joint of the rails, will hold that half down upon my segmental bearing-piece, which is applied as aforesaid, in its cell, at the bottom of the notch in the chair, for the ends of the two rails to act upon, wherefore by the keying of the two opposite pins of the same chair the junction of two rails is made secure laterally; and also, the extremity of each of those two rails which form the junction is fastened downwards, independently of the fastening down of the extremity of its fellow rail, in the same chair, and on the same segmental bearing-piece at the bottom of the notch of that chair. But those chairs which are to form the intermediate supports for the several lengths of iron rails, between the junctions of those lengths, require only one of the said cylindrical pins in each chair, viz. through one of the sides or cheeks of the notch of the chair, the opposite side or cheek being a flat vertical surface (or nearly so) against which the flat vertical surface of the iron rail is pressed laterally, and held firm thereto, by the keying up of the cylindrical pin through that cheek or side of the notch of the chair to which the said flat vertical surface is opposite, and at the same time the action of the conical point of the cylindrical pin, in its grooved recess in the rail, holds the rail forcibly downwards upon my segmental bearing-piece, which is applied in its cell, as aforesaid, at the bottom of the notch of the chair for the underside of the rail to rest upon. The said intermediate chairs, with one cylindrical pin in each chair, by holding the rails laterally against the flat vertical side or cheek thereof, as above mentioned, will keep the rails edgeways upwards, and firmly retained in their proper positions for the wheels of railway carriages and locomotive steam-engines to travel over them. The other kind of chairs hereinbefore mentioned, with two cylindrical pins in each chair, confine the junctions of the several lengths of iron rails together laterally, at the same time that they hold down the extremity of each rail on my segmental bearing-piece. The grooved recesses which are formed in the sides of the iron rails for the reception of the conical points of the cylindrical pins, and for giving them their oblique bearing-down action, being of an oblong form, in the direction of the length of the rails, as aforesaid, that form will permit of slight elongations or contractions of the rails lengthwise, without causing any relaxation or alteration in the confinement of the rails in their chairs, because elongations and contractions will have no influence on the lateral pressure which the said conical points are required to exert against the rails, nor on the holding-down action which results from the same lateral pressure, in consequence of the oblique bearing-down action of the conical points against the lower part of the grooved recesses in the sides of the rails. And in consequence of the centre of the said conical points being at or very near to the centre of the circular curvature of the cell at the bottom of the notch in the chair (and of my segmental bearing-piece, which is lodged in that cell,) any slight tilting or inclination of the chair in the direction of the length of the rails and consequent self-adjustment of the said segmental bearing-piece in its cell will not cause any relaxation of the confinement of the rails in their chairs, because such tilting will have no influence either on the lateral action of the conical points, or on the holding-down action, which results therefrom, by oblique action of the said conical points in the grooved recesses in the rails. And note—in lieu of mere conical points to the said cylindrical pins, the latter may terminate with obtuse wedge-like or chissel ends, adapted to enter into and act obliquely within the aforesaid oblong grooved recesses in the rails, in which case the cylindrical pins must be allowed a small liberty of turning motion in their sockets, through the sides or cheeks of the chairs, in order that their chissel ends may continue to conform to the grooved recesses in the rails, notwithstanding any slight tilting of the chairs themselves. For this purpose the mortices through the cylindrical pins must be as much wider than the thickness of the wedge-like keys which are to be driven through the said mortices as will permit of the requisite turning motion of the cylindrical pins in their sockets. And the acting extremities of the said cylindrical pins, whether conical points or chissel ends, may be case-hardened, or they may be made of steel, hardened and tempered, in order to give them durability if required. And note—the sockets for the said cylindrical pins may be made through the cheeks or sides of the chairs, in a direction somewhat inclining from the horizontal, instead of being horizontal, as hereinbefore mentioned, the conical or chissel-shaped ends of the pins being rather lower than the other ends, in order that the lateral action and pressure exerted by the pins, may act against the rails with a downwards tendency when the pins are forced endways by their cross-keys into the grooved recesses in the rails. The holding-down action on the rails will be rather greater if the pins are so inclined, than if the pins are horizontal, but their inclination from the horizontal must not be so great as to cause any sensible impediment to the turning-action, which the conical points of the pins must make within the grooved recesses in the rails, or else the turning-motion which the chissel-ended pins must make in their sockets, in order to accommodate to a tilting inclination of the chairs.

Fig. 1, in sheet I., is a perspective view; and in sheet II., fig. 2, is a lateral elevation; Fig. 3, a transverse section; and Fig. 4, a horizontal plan of a chair, for supporting and uniting the extremities of the lengths of iron rails for edge railways. A, A, is the flat bottom or base of the chair, which is to be bedded upon the stone block, or wooden sleeper, and firmly fastened thereto by spikes driven down through the holes, *a*, *a*. B, B, are the cheeks or sides of the notch in the chair, that notch being the parallel space which is left between the said cheeks or sides for the reception of the rails C, *c*, D, *d*, which may join together with a half-lap joint, as is shown in the perspective view, fig. 1, and in the plan, fig. 4, the double or overlapping parts, *c*, *d*, being of the same size, or nearly of the same size, as the other parts of the rails, and those parts are included within the notch of the chair. The bottom of the said notch is deeper than necessary for receiving the rails, and is depressed into a concavity or cell suitable for the reception of my segmental bearing-piece, 4; see also fig. 1, where the same is represented separately; the under edges of the rails rest upon the uppermost flat surface of the said bearing-piece, 4, the undermost part of which is a circular curve, and the form of the cell corresponds thereto. 5 and 6, are the cylindrical pins, which are fitted into cylindrical sockets, through each of the cheeks or sides. B, B, and 8, 9, are the tapering or wedge-like keys, which are inserted through suitable mortices in the cheeks, and across the pins 5 and 6, for the purpose of forcing forward those pins, so that their pointed extremities may press obliquely upon the lower parts of the grooved recesses in the rails, with a bearing-down action, which will confine the rails downwards upon the bearing-piece, 5, at the same time that they are confined laterally in the chair. The cylindrical pins, represented in figs. 1, 2, 3, and 4, are in an inclined direction, in order that their bearing-down action may be more efficient, but the pins may be horizontal; in either case the centre of curvature of their points, at the places where those points bear in the grooved recesses of the rails, being at, or very near to, the centre of curvature of the lower part of my segmental bearing-piece, and of the cell in which it is lodged. In fig. 1, the cylindrical pins are shown detached, in order to explain the manner in which the pointed extremity applies into the grooved recess in the rails, so as to exert a bearing-down action thereon; and in the same fig. 1, a chisel-end is represented, as well as a conical point.

Fig. 5, sheet I., is a perspective view; and

Fig. 6, sheet II., is a transverse section of a chair for supporting the iron rails at intermediate distances between the extremities or junctions of their several lengths; it has only one cylindrical pin, 5, fitted through one of its cheeks, B, the opposite cheek, K, being a flat vertical surface against which the flat side of the rail is pressed and held firm, by the keying up of the cylindrical pin, 5, so as to confine the rail laterally at the same time that the oblique action of the point of the cylindrical pin, 5, in the grooved recess in the rail, produces a bearing-down action, which confines the rail down upon my segmental bearing-piece, 4, which is applied in a cell at the bottom of the notch of the chair, exactly the same as in the chair with two cylindrical pins, before described. The chairs are to be made of cast-iron; the sockets for the cylindrical pins, the mortices for their wedge-like keys, and the cells for my segmental bearing-pieces, being all formed in the casting, as well as the holes for the holding-down spikes. The wedge-like cross keys, the cylindrical pins, and the segmental bearing-pieces, are to be made of wrought-iron.

From the forthcoming number of the "Mechanics' Magazine and Register of Inventions and Improvements."

Memoir of Robert Fulton.

WHO WAS THE INVENTOR OF STEAM NAVIGATION?

[From Dunlap's History of the Rise and Progress of the Arts of Design in the United States.]

The parents of this gentleman were of Irish origin: the father, a native of Kilkenny—the mother a Pennsylvanian, by name Smith, and descended from Hibernian emigrants. Robert was the oldest of two sons: he had three sisters, two older than himself. He was born in Little Britain, in the county of Lancaster, Pennsylvania, in 1765, and showed early indications of his attachment to mechanics; but was, as a youth, still more devoted to the pencil. He commenced the painting of portraits and landscapes, as a profession, at the age of seventeen; that is, in the year 1782, and continued so employed until 1785. During this period, Charles Wilson Peale was the principal painter in Philadelphia, until Pine's arrival; and doubtless Fulton did not neglect the instruction to be derived from them and their pictures.*

Robert Fulton, at the age of 21, had, by his industry and frugality, enabled himself to purchase a little farm in Pennsylvania, on which he established his mother, and soon after crossed the Atlantic to seek instruction from Benjamin West. That Mr. West justly appreciated the character of his young countryman, is attested by his presenting him with two pictures: one representing the great painter with his wife's portrait on his easel; and the other Fulton's own portrait.

Mr. Fulton, perhaps by invitation, practised as a portrait painter in Devonshire, and here appears to have revived his attachment to mechanics. Canal navigation attracted his attention, as he here became acquainted with the Duke of Bridgewater, and they became united by their mutual love of science. Lord Stanhope and Fulton were attracted to each other by similar propensities. In 1793 was published a print, engraved by Sherwin, from a picture by Fulton, of Louis XVI. in prison, taking leave of his family. The only copy I have seen is possessed by my friend Dr. Francis: it is now a curiosity. As early as 1793, Fulton's mind was engaged in projects to improve inland navigation. In 1794 he obtained a patent for a double inclined plane, and other patents, from the British government. For eighteen months he resided in Birmingham, and improved his knowledge of mechanics in that great workshop.

In 1795 he published several essays, which elicited the compliments and recommendations of Sir John Sinclair and the Board of Agriculture. The profession of a painter was abandoned, and his knowledge of the art of design applied to drawings on the subjects which now engaged his mind.

In the year 1797 Mr. Fulton had apartments in the same Parisian hotel with Joel Barlow; and a friendship was then formed between these two eminently gifted and amiable individuals, which was only broken by death. When Mr. Barlow established himself in a style befitting his public station, in a hotel appropriated to himself and lady, he invited Fulton to make one of his family. Here he resided seven years, during which he studied the modern languages, and the higher branches of science. During this time Fulton also projected a panorama, in imitation of Barker. It had some success, and is said to have been the first seen in Paris. But his mind was occupied with other projects, particularly the explosion of gunpowder under water. His torpedoes were offered to the French and Dutch governments; and when Bonaparte became first consul, he appointed a commission to examine Fulton's plans, and assist in making experiments.

When chancellor Livingston arrived in Paris, the intimacy between him and Fulton commenced, which led to the fulfilment of his destinies, by the accomplishment of steam navigation.

If the failure of Mr. Fulton's schemes for the destruction of ships of war, by torpedoes, fixed his attention upon navigating vessels by steam, we may congratulate the world that the conflicting nations of Europe, to whom with perfect indifference he seems to have offered his projects and services, for the destruction of their enemies, did not accept of them. If, as we believe, the views of Mr. Fulton were to banish naval warfare from the world, perhaps that change which will take place in defensive warfare, by the use of the steam frigate, such as Fulton built at New-York, in harbors and on coasts, may go far to answer the same end.

In 1801 Mr. Fulton repaired to Brest, to make experiments with the plunging boat he had constructed the preceding winter. This, as he says, had many imperfections, natural to a first machine of such complicated combinations. Added to this, it had suffered much injury from rust, in consequence of his having been obliged to use iron instead of brass or copper, for bolts and arbors.

Notwithstanding these disadvantages, he engaged in a course of experiments with the machine, which required no less courage than energy and perseverance. Of his proceedings he made a report to the committee appointed by the French executive; from which report we learn the following interesting facts:

"On the 3d July, 1801, he embarked with three companions on board his plunging boat in the harbor of Brest, and descended in it to the depth of five, ten, fifteen, and so to twenty-five feet; but he did not attempt to go lower, because he found that his imperfect machine would not bear the pressure of a greater depth. He remained below the surface one hour. During this time they were in utter darkness. Afterwards he descended with candles; but finding a greater disadvantage from their consumption of vital air, he caused previously to his next experiment a small window of thick glass to be made near the bow of his boat, and he again descended with her on the 24th of July, 1801. He found that he received from his window, or rather aperture covered with glass, for it was no more than an inch and a half in diameter, sufficient light to enable him to count the minutes on his watch. Having satisfied himself that he could have sufficient light when under water; that he could do without a supply of fresh air for a considerable time; that he could descend to any depth, and rise to the surface with facility; his next object was to try her movements, as well on the surface as beneath it. On the 26th of July he weighed his anchor and hoisted his sails: his boat had one mast, a mainsail, and jib. There was only a light breeze, and therefore she did not move on the surface at more than the rate of two miles an hour; but it was found that she would tack and steer, and sail on a wind or before it, as well as any common sailing boat. He then struck her mast and sails; to do which, and perfectly to prepare the boat for plunging, required about two minutes. Having plunged to a certain depth, he placed two men at the engine which was intended to give her progressive motion, and one at the helm, while he, with a barometer before him, governed the machine, which kept her balanced between the upper and lower waters. He found that, with the exertion of one hand only, he could keep her at any depth he pleased. The propelling engine was then put in motion, and he found, upon coming to the surface, that he had, in about seven minutes, made a progress of four hundred metres, or about five hundred yards. He then again plunged, turned her round while under water, and returned to near the place he began to move from. He repeated his experiments several days successively, until he became familiar with the operation of the machinery, and the movements of the boat. He found that she was as obedient to her helm under water, as any boat could be on the surface; and that the magnetic needle traversed as well in the one situation as the other.

"On the 7th of August Mr. Fulton again descended, with a store of atmospheric air compressed into a copper globe of a cubic foot capacity, into which two hundred atmospheres were forced. Thus prepared, he descended with three companions to the depth of about five feet. At the expiration of an hour and forty minutes, he began to take small supplies of *pure* air from his reservoir, and did so as he found occasion, for four hours and twenty minutes. At the expiration of this time he came to the surface, without having experienced any inconvenience from having been so long under water.

"Mr. Fulton was highly satisfied with the success of these experiments; it determined him to attempt to try the effects of these inventions on the English ships which were then blockading the coast of France, and were daily near the harbor of Brest.

"His boat at this time he called the submarine boat, or the plunging boat; he afterwards gave it the name of the Nautilus; connected with this machine were what he then called submarine bombs, to which he has since given the name of torpedoes. This invention preceded the Nautilus. It was, indeed, his desire of discovering the means of applying his torpedoes, that turned his thoughts to a submarine boat. Satisfied with the performance of his boat, his next object was to make some experiments with the torpedoes. A small shallop was anchored in the roads, with a bomb containing about twenty pounds of powder; he approached to within about two hundred yards of the anchored vessel, struck her with the torpedo, and blew her into atoms. A column of water and fragments was blown from eighty to one hundred feet in the air. This experiment was made in the presence of the prefect of the department, Admiral Villaret, and a multitude of spectators.

* "Robert Fulton," says Edward Everitt, "was a portrait painter in Pennsylvania, without friends or fortune." A school-fellow of Fulton says, "Robert Fulton was a school-boy in Lancaster, Pennsylvania; his mother then a widow. He borrowed paints and brushes of another, and soon excelled, but neglected his books. He was sent to Philadelphia, to a silversmith; but not liking, he went to London."

"The experimental boat of Mr. Livingston and Mr. Fulton was completed early in the spring of 1808: they were on the point of making an experiment with her, when one morning, as Mr. Fulton was rising from a bed in which anxiety had given him but little rest, a messenger from the boat, whose precipitation and apparent consternation announced that he was the bearer of bad tidings, presented himself to him, and exclaimed in accents of despair, "Oh, sir, the boat has broken in pieces and gone to the bottom!" Mr. Fulton, who himself related the anecdote, declared that this news created a despondency which he had never felt on any other occasion; but this was only a momentary sensation. Upon examination, he found that the boat had been too weakly framed to bear the great weight of the machinery, and that in consequence of an agitation of the river by the wind the preceding night, what the messenger had represented had literally happened. The boat had broken in two, and the weight of her machinery had carried her fragments to the bottom. It appeared to him, as he said, that the fruits of so many months' labor, and so much expense, were annihilated; and an opportunity of demonstrating the efficacy of his plan was denied him at the moment he had promised it should be displayed. His disappointment and feelings may easily be imagined; but they did not check his perseverance. On the very day that this misfortune happened, he commenced repairing it. He did not sit down idly to repine at misfortunes which his manly exertions might remedy, or waste, in fruitless lamentations, a moment of that time in which the accident might be repaired. Without returning to his lodgings he immediately began to labor with his own hands to raise the boat, and worked for four and twenty hours incessantly, without allowing himself rest, or taking refreshment: an imprudence which, as he always supposed, had a permanent bad effect on his constitution, and to which he imputed much of his subsequent bad health.

"The accident did the machinery very little injury; but they were obliged to build the boat almost entirely new; she was completed in July: her length was sixty-six feet, and she was eight feet wide. Early in August Mr. Fulton addressed a letter to the French National Institute, inviting them to witness a trial of his boat, which was made in their presence, and in the presence of a great multitude of the Parisians. The experiment was entirely satisfactory to Mr. Fulton, though the boat did not move altogether with as much speed as he expected. But he imputed her moving so slowly to the extremely defective fabrication of the machinery, and to imperfections which were to be expected in the first experiment with so complicated a machine, but which he saw might be easily remedied."

Mr. Fulton returned home in 1806, and renewed his efforts to prove that he could destroy vessels by invisible means, and the next year he made an experiment upon a hulk anchored in New-York harbor for the purpose. The owner of the hulk having consented, the experiment was fully successful. In 1810 the United States made an appropriation for trying the effect of torpedoes and other submarine explosions. The experiments were made upon the sloop of war Argus, Capt. Lawrence, and failed. Mr. Fulton's friends still thought, or said, that the experiments would be successful. Commodore Rogers thought and reported them altogether impracticable.

We all know that Fulton was not the first who propelled a boat by steam, but we know that we owe to him those inventions which remedied the failures of former experimenters, and, in fact, by his genius and skill, created the steamboat. Fulton was assisted by friends with advice and funds; but Fulton's was the mind and the perseverance which gave to the world a mode of conveyance, for speed, ease, and certainty, so powerful in its influence on travelling and commerce, as to have advanced civilization on its destined progress beyond any former gift bestowed upon man, printing excepted. He thus writes to his friend, Joel Barlow: "New-York, August 2, 1807. My dear friend, my steamboat voyage to Albany and back has turned out rather more favorable than I had calculated. The distance from New-York to Albany is 150 miles; I ran it up in thirty-two hours, and down in thirty hours, the latter is five miles an hour. I had a light breeze against me the whole way going and coming, so that no use was made of my sails, and the voyage has been performed wholly by the power of the steam engine. I overtook many sloops and schooners, beating to windward, and passed them as if they had been at anchor.

"The power of propelling boats by steam is now fully proved. The morning I left New-York, there was not perhaps thirty persons who believed that the boat would move a mile an hour, or be of the least utility; and while we were putting off from the wharf, which was crowded with spectators, I heard a number of sarcastic remarks. This is the way, you know, in which ignorant men compliment what they call philosophers and projectors.

"Having employed much time and money, and zeal, in accomplishing this work, it gave me, as it will you, great pleasure to see it so fully answer my expectations. It will give a cheap and quick conveyance to merchandise on the Mississippi and Missouri, and other great rivers, which are now laying open their treasures to the enterprise of our countrymen. And although the prospect of personal emolument has been some inducement to me, yet I feel infinitely more pleasure in reflecting with you on the immense advantage my country will derive from the invention."

Thus the first voyage, and that perfectly successful, was made in thirty-two hours from New-York to Albany. In consequence of this first voyage it is now made in nine hours.

Surely the discoverer enjoys a pleasure greater and purer than any other human being can enjoy. We mean the discoverer who has just views of the great advantages which will result from the successful termination of his researches. Not to mention many others, let us reflect upon the pure and intense joy of Columbus, when he landed on St. Salvador—of Franklin, when he succeeded in drawing the lightning, innocuous, from the thunder cloud—of Worcester, when convinced of the power of steam—and of Fulton, when he saw, felt, knew, that he could triumph over winds and tides, by machinery of his own invention—when he heard the acclamations of the scoffers, and received the praises of the wise.

"He published his work, entitled 'Torpedo War, or Submarine Explosions.' He adopted as a motto for his publication, his favorite sentiment, 'The liberty of the seas will be the happiness of the earth.' He addressed it to the President of the United States, and to the members of both houses of Congress. It contained a description of the experiments he had made, of his engines as he had improved them, and of the manner in which they might be used. He expressed the most sanguine expectations as to the effects they would produce, when they had attained the improvements of which he believed them capable, and had the advantage of practice, by which gunnery, and other modes of warfare, had been brought to their present perfection." Fulton's ideas respecting submarine guns led to the invention of the steam frigate.

"He communicated to Mr. Jefferson an account of his experiments on submarine firing, with drawings of his various plans. Mr. Jefferson expressed himself much pleased with this novel mode of maritime warfare, and assured Mr. Fulton that he would recommend it to the attention of government.

"It is curious to observe how Mr. Fulton's projects grew one out of another.

"The submarine guns gave rise to the steam man-of-war.

"It having been suggested by a distinguished naval officer, before alluded to, that in approaching an enemy so near as was necessary to give effect to submarine cannon, the vessel, if she was rigged in the ordinary way, would be liable to be entangled with her adversary; to meet this objection, Mr. Fulton proposed to move the vessel by steam. His reflections on this project, and what he saw of the performance of so large a vessel as the Fulton, her speed, and the facility with which she was managed, led him to conceive, that a vessel of war might be constructed, in which, to all the advantages possessed by those now in use, might be added the very important ones which she would derive from being propelled by steam as well as by the winds."

The character of Mr. Fulton is elucidated by an incident given thus in Colden's life of him:

"We must all remember how long, and how successfully, Redheffer had deluded the Pennsylvanians by his perpetual motion.

"Many men of ingenuity, learning, and science, had seen the machine: some had written on the subject; not a few of these were his zealous advocates; and others, though they were afraid to admit that he had made a discovery which violated what were believed to be the established laws of nature, appeared also afraid to deny what the incessant motion of his wheels and weights seemed to prove. These contrived ingenious theories, which were hardly less wonderful than the perpetual motion itself. They supposed that Redheffer had discovered a means of developing gradually some hidden power, which, though it could not give motion to his machine for ever, would keep it going for some period, which they did not pretend to determine.

"One of these perpetual motions commenced its career in this city* in eighteen hundred and thirteen. Mr. Fulton was a perfect unbeliever in Redheffer's discovery, and although hundreds were daily paying

* New-York.

their dollar to see the wonder, Mr. Fulton could not be prevailed upon for some time to follow the crowd. After a few days, however, he was induced by some of his friends to visit the machine. It was in an isolated house in the suburbs of the city.

"In a very short time after Mr. Fulton had entered the room in which it was exhibited, he exclaimed, 'Why, this is a crank motion.' His ear enabled him to distinguish that the machine was moved by a crank, which always gives an unequal power, and therefore an unequal velocity in the course of each revolution: and a nice and practised ear may perceive that the sound is not uniform. If the machine had been kept in motion by what was its ostensible moving power, it must have had an equable rotary motion, and the sound would have been always the same.

"After some little conversation with the showman, Mr. Fulton did not hesitate to declare that the machine was an imposition, and to tell the gentleman that he was an impostor.

"Notwithstanding the anger and bluster which these charges excited, he assured the company that the thing was a cheat, and that if they would support him in the attempt, he would detect it at the risk of paying any penalty if he failed.

"Having obtained the assent of all who were present, he began by knocking away some very thin light pieces of lath, which appeared to be no part of the machinery, but to go from the frame of the machine to the wall of the room, merely to keep the corner posts of the machine steady.

"It was found that a catgut string was led through one of these laths and the frame of the machine to the head of the upright shaft of a principal wheel; that the catgut was conducted through the wall, and along the floors of the second story, to a back cock-loft, at a distance of a number of yards from the room which contained the machine, and there was found the moving power. This was a poor old wretch, with an immense beard, and all the appearance of having suffered a long imprisonment; who, when they broke in upon him, was unconscious of what had happened below, and who, while he was seated on a stool, gnawing a crust, was with one hand turning a crank.

"The proprietor of the perpetual motion soon disappeared. The mob demolished his machine, the destruction of which immediately put a stop to that which had been, for so long a time, and to so much profit, exhibited in Philadelphia."

In the year 1806, Mr. Fulton married Miss Harriet Livingston, daughter of Walter Livingston, Esq. One son and three daughters were the fruit of his marriage. In 1815 Mr. Fulton was examined as a witness in a steamboat cause, at Trenton.

"When he was crossing the Hudson to return to his house and family, the river was very full of ice, which occasioned his being several hours on the water in a very severe day. Mr. Fulton had not a constitution to encounter such exposure, and upon his return he found himself much indisposed from the effects of it. He had at that time great anxiety about the steam-frigate; and after confining himself for a few days, when he was convalescent, he went to give his superintendence to the artificers employed about her: he forgot his debilitated state of health in the interest he took in what was doing on the frigate, and was a long time, in a bad day, exposed to the weather on her decks. He soon found the effects of this imprudence. His indisposition returned upon him with such violence as to confine him to his bed. His disorder increased, and on the twenty-fourth day of February, eighteen hundred and fifteen, terminated his valuable life.

"It was not known that Mr. Fulton's illness was dangerous till a very short time before his death, which was unexpected by his friends, and still more so by the community. As soon as it was known, all means were taken to testify, publicly, the universal regret at his loss, and respect for his memory. The newspapers that announced the event, had those marks of mourning which are usual in our country when they notice the death of public characters. The corporation of our city, the different literary institutions, and other societies, assembled, and passed resolutions expressing their estimation of his worth, and regret at his loss. They also determined to attend his funeral, and that the members should wear badges of mourning for a certain time.

"As soon as the legislature, which was then in session at Albany, heard of the death of Mr. Fulton, they expressed their participation in the general sentiment by resolving that the members of both houses should wear mourning for some weeks.

"This is the only instance we believe of such public testimonials of regret, esteem, and respect, being offered on the death of a private citizen, who never held any office, and was only distinguished by his virtues, his genius, and the employment of his talents.

"He was buried on the 25th day of February, 1815. His corpse was attended from his last residence, (No. 1 State street,) by all the officers of the national and state governments then in the city, by the magistracy, the common council, a number of societies, and a greater number of citizens than had been collected on any similar occasion. From the time the procession began to move, till it arrived at Trinity Church, minute guns were fired from the steam-frigate and the West Battery. His body, in a leaden coffin, covered with plain mahogany, on which is a metal plate engraved with his name and age, is deposited in a vault belonging to the Livingston family."

As a painter Mr. Fulton does not rank high. Probably his best picture is the portrait of his friend Barlow. We owe to him the splendid edition of Barlow's Columbiad. Mr. Colden says:

"The elegant plates which adorn that work were executed under the superintendence and advice of Mr. Fulton. He paid about five thousand dollars for the paintings, the plates, and letter press, which gave him a property in the publication. He relinquished, by his will, all his right to the widow of Mr. Barlow, with the reservation of fifty of the proof and embellished copies of the work. It was printed in Philadelphia, in quarto, and published in 1807; it is dedicated by Mr. Barlow to Mr. Fulton, in such terms as evince the strong attachment which subsisted between these men of genius. The original paintings, from which the prints of the Columbiad were engraven, form a part of the handsome collection which Mr. Fulton has left to his family."

We owe to him the introduction into this country of the pictures painted by his friend and master, West, from Lear and Hamlet, for Boydell's Shakspeare. The Lear cost him two hundred and five guineas, and the Ophelia one hundred and twenty-five, at Boydell's sale. At the same time he purchased a fine picture by Raphael West, from "As you like it." West's pictures were painted for Boydell, and his great project failing, the government allowed his pictures to be disposed of by a lottery. Whether Fulton was an adventurer in this lottery, or purchased of the owner of a prize, we know not. That he did not purchase of the Royal Academy is certain, or at any sale of their pictures. My impression is that he was an adventurer in the lottery, and gained these paintings as a prize. The inaccuracy of one part of Mr. Colden's statement renders further inaccuracy probable.

He endeavored to persuade his countrymen to purchase such pictures of West's as were at the artist's disposal, and he wrote to the citizens of Philadelphia thus:

"I now have the pleasure to offer you a catalogue of the select works of Mr. West, and with it to present you the most extraordinary opportunity that ever was offered to the lovers of science. The catalogue referred to is a list of all Mr. West's productions, portraits excepted. No city ever had such a collection of admired works from the pencil of one man; and that man is your fellow-citizen. The price set on the collection is fifteen thousand pounds sterling, a sum inconsiderable when compared with the objects in view, and the advantages to be derived from it."

Mr. Fulton was six feet in height, slender in his form, easy and graceful in his deportment. His countenance was animated, and his eyes and forehead betokened genius and unconquerable ardor. He was a kind father, a fast friend, an enlightened philosopher, and a good republican. The arts of America are indebted to him much—but the science and happiness of the world more.

Thus far we have copied Mr. Dunlap's Memoir of Fulton. As there are several claimants for the honor of first introducing steam for navigating purposes, we shall present our readers with extracts from Mr. Bowie's pamphlet advocating Mr. Symington's views, and afterwards insert portions of an article in Chambers' Edinburgh Journal, stating that to Mr. Taylor, the schoolfellow and associate of Mr. Symington, the honor belongs. Mr. Bowie, in reply to the article in Chambers' Journal, says:

A very cursory perusal will show its utter worthlessness, and even to the veriest tyro in mechanics, render its folly and presumption apparent.

The letter and extract, with Mr. Symington's signature appended, can be explained in a manner any thing but creditable to the reputation of Taylor; and the assertion that he superintended the construction of the engine is at variance with the fact admitted, that it was upon the same principle as one for which Mr. Symington had previously procured a patent. Besides, Taylor has still further shown that he was unfit for the office of superintending the construction of the engine alluded to, by the absurd declaration that Mr. Symington in his invention had thrown off the air pump.

Notwithstanding the hollowness of Tay-

lor's pretensions, and notwithstanding Mr. Goulbourn's refusal to allow Mr. Symington's manly petition for parliamentary investigation, as to the justice of his claims, to be presented, the relatives or friends of the former individual,—described as an *amateur* by Captain Basil Hall,—have succeeded, by "*stealthy steps*" and secret influence, in obtaining for his widow a "*surreptitious*" pension from government of fifty pounds per annum. Surely such a glaring act of injustice and misappropriation of the public money deserves the reprobation of every honorable and well constituted mind.

[From Bowie's Narrative.]

William Symington was a native of Leadhills, county of Lanark, Scotland. While receiving an education to qualify him for the Church, an early predilection for mechanical philosophy led him to abandon his theological studies, and pursue with ardor those connected with his favorite science. His genius soon attracted the notice and secured the patronage of Gilbert Meason, Esq. then connected with the Wanlock Head lead mines. Before completing his twenty-first year, Mr. Symington had made several improvements on the steam engine; and, having protected them by His Majesty's Royal Letters Patent, constructed and introduced engines on his principle into different parts of England and Scotland.

As early as the year 1794, amidst the wild bleak scenery of the country he inhabited, and when he knew nothing of any attempts which might have been made to realize such an idea, it occurred to him that steam might be rendered available for the propulsion of locomotive carriages. He immediately set about embodying his idea; and, in 1786, submitted to the inspection of the professors and other scientific gentlemen in Edinburgh, a working model of a steam carriage, which afforded such proofs of capability, that he was warmly urged by all present to carry his invention into full effect.

While the model was in Edinburgh, Patrick Miller, Esq., of Dalswinton, who had heard of it from Mr. James Taylor, tutor in his family, who had been a schoolfellow of Mr. Symington, called at Mr. Meason's, and having minutely inspected it, expressed himself highly pleased with the construction and performance. In the course of conversation, Mr. Miller mentioned that he had spent much time in making experiments, for the propelling of vessels upon water by wheels, instead of sails or oars: and that they had been put in motion by applying manual strength to turning a handle or winch. He also said he had attempted to work them by the power of horses; as he had heard something of the same kind had been accomplished, even by means of oxen, in America. It occurred to Mr. Symington, and he stated his opinion to Mr. Miller, that a steam engine might be constructed which would propel a vessel, by communicating a rotatory motion to the paddles by the alternate action of two ratchet wheels, in the same manner as in the model of the steam carriage, then before them. Mr. Miller said he considered such a thing impracticable; and inquired how it would be possible to work such an engine on board, without setting the vessel on fire?

The description given of the model, and the manner in which it was intended to apply the power of steam, seemed to convince Mr. Miller of the practicability of the project: and he observed, that if Mr. Symington thought he could construct a steam engine, and work it with safety on board of a vessel, an experiment should be made, on a small scale, as soon as he, (Mr. Symington,) could possibly attend to it: and it was explicitly understood that the plan and construction of the engine, the mode of producing rotatory motion, and the means to be adopted for guarding against danger, were to be left entirely to Mr. Symington.

Soon after this, he proceeded to construct a small engine on a similar principle to one for which he had previously procured a patent. It was executed under his immediate inspection, and fitted on board a small double keeled vessel, lying upon a lake, near the House of Dalswinton. With this vessel a trial was made of the powers of the invention, in the autumn of 1788, in presence of Mr. Miller, and various persons of respectability; when the boat was propelled in so satisfactory a manner, that it was immediately determined to commence another experiment, upon a more extended scale.

In the month of October, 1789, a second exemplification* was afforded on the Forth and Clyde inland navigation, in presence of hundreds of spectators, who lined the banks of the canal, to witness what seemed so extraordinary an attempt; and who testified by acclamation their satisfaction at its result. Mr. Miller, Messrs. John Adam, of Blairadam, John Balfour, of Pilrig, Ambrose Tibbetts, members of the Carron Company, James Taylor, and David Drysdale, an experienced seaman, who took charge of the helm, were on board. The boat glided along, propelled at the rate of nearly six miles an hour; and all parties interested declared their conviction of the success of the experiment.

After an interval of ten years, the late Thomas Lord Dundas, of Kerse, applied to Mr. Symington, and having alluded to his former experiments, expressed a wish that he would employ himself in constructing a vessel, capable of being propelled by the power of steam, and superseding the use of horses, in dragging vessels upon the Forth and Clyde canal; of which canal his lordship was an extensive proprietor. Accordingly, under the auspices of that intelligent nobleman, a series of experiments was commenced in January, 1801, and continued until April, 1803. The cost of these experiments somewhat exceeded £7,000; but they placed beyond the possibility of doubt the practicability of steam navigation.

Lord Dundas was so convinced of the efficiency of Mr. Symington's exemplification, that he requested a complete model of the steam engine and boat, (with a set of ice breakers attached,) should be made. This was done, and Mr. Symington proceeded to London and presented it to his lordship.

During the time that the boat lay at Bainsford, Henry Bell, of Glasgow, was frequently beheld inspecting it; and, in 1811, he, in conjunction with others, constructed the Comet steamboat, which in that year first plied upon the Clyde.

Much praise has been awarded to Bell for the introduction of steam navigation; but how far he deserves it, the following facts will elucidate: Notwithstanding the many opportunities he had enjoyed,—notwithstanding his having voyaged to America, to instruct, or to be instructed by, the celebrated Fulton,—the Comet was far inferior in her performance, even to Mr. Symington's second exemplification. When the Comet commenced her operations as a passage boat upon the Clyde, she possessed four insignificant paddle-wheels; and took nine hours to sail from Port Glasgow to Glasgow.

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In concluding this narrative, it is but doing an act of justice, to place on record the principal intelligent and spirited individuals alluded to in the preface.

It has been shown that Mr. Meason proved a warm and zealous patron; that Mr. Miller afforded the means of bringing the invention into notice; and that Lord Dundas perseveringly aided to bring it to the perfection which it attained. But it has not been stated, although deserving of acknowledgment, that his lordship, during the remainder of his life, frequently and generously befriended Mr. Symington.

For Mr. Bruce, the celebrated Abyssinian traveller, Mr. Symington entertained the strongest attachment. Mr. Bruce was so sensible of his worth, that from the time they first became acquainted, until death put an end to their intimacy, they were almost inseparable. And it was supported in the arms of Mr. Symington, that he who had travelled so far, and encountered dangers so many, yielded up his spirit.

To Sir Ronald Ferguson, Sir George Clerk, Prof. Leslie, Messrs. Gilbert Laing Meason, and —— Jardine, engineer, Mr. Symington considered himself under deep obligations for the interest they took in his welfare; and to Mr. James Walker he owed the obtaining of a small donation from the London steamboat proprietors. The Messrs. Staintons, of Carron, were also kind and attentive to his interests; and Mr. Robert Wight, accountant, of Edinburgh, rendered him many acts of friendship, and much valuable assistance.

Mr, Symington during life ceased not to remember his benefactors, and it may, with truth, be said, whatever failings he may have possessed, ingratitude was not among the number.

We add the following corroborative testimony, including Judge Clerk's opinion when at the bar:

"Opinion of John Clerk, Esq., advocate, regarding William Symington's specification and patent for steamboats.

"1. I am of opinion there can be no well founded objection to the specification: it describes, in proper terms, the invention for which the patent was granted.

"2. The notice the patentee gives how the same is to be performed is by no means irrelative; but, on the contrary, is requisite and proper.

"3. If the proprietors, or builders of steamboats, refuse a reasonable compensation, the patentee is entitled to stop them by an interdict; but I would not advise that measure. He should rather bring an action of damages against them, for having invaded his privilege, and benefitted themselves by his invention. (Signed) JOHN CLERK.

"Edinburgh, June 30, 1834."

"It is much to be regretted that there existed not enterprise enough at that time, in Scotland, to encourage the ingenious artisan to repeat his experiments on the Clyde. All the subsequent improvements, however, in steam navigation, may be fairly traced to Mr. Symington's attempt; and we cannot

help thinking that he has a strong claim on the national gratitude. He is still alive, and we fear not in the most flourishing circumstances. Should the state decline rewarding such meritorious services, the opulent proprietors of steamboats might well evince their liberality and discernment, by bestowing on him some recompense."—[Article on steam navigation—Supplement to the Encyclopædia Britannica.]

"It is remarkable, also, that the unfortunate Symington, who has such claims to the original invention of the steamboat, had previously contrived a similar application for the propelling of carriages; and actually exhibited, in the year 1787,* in the house of Mr. Gilbert Meason, in Edinburgh, the first model of a steam carriage that was, perhaps, ever seen."—[Article on locomotive carriages—Quar. Rev., March, 1830, page 380.]

"Mr. Symington took out a patent for steamboats in the year 1801; and he has the undoubted merit of being the first person who applied the power of the steam engine to produce motion in vessels."—[Capt. Basil Hall's Travels in North America, Vol. 2, page 387.]

"The earliest successful application of steam appears to have been made on the Forth and Clyde inland navigation by Mr. Symington."—[E. Galloway on the Steam Engine.]

"Several attempts have been made to apply the force of steam to the purpose of propelling boats in canals; and there seems to be no reason to think the undertaking by any means liable to insuperable difficulties. Mr. Symington appears to have had considerable success; and the method that he has employed for making a communication between the piston and the water wheel is attended with many advantages."—[Journal of the Royal Institution of Great Britain, Vol. 1, 1802, p. 195.]

[From Chambers' Edinburgh Journal.]

The credit of the inestimable invention of applying steam to the purposes of navigation has now been claimed by so many pretenders, that we believe the public are at this moment as much puzzled to whom to assign the palm as they have all along been to penetrate the mystery of the authorship of Junius. Independent of the numerous claimants in our own country, our brethren on the other side of the Atlantic have not been slow to assert their title: but although it be true that the great and important results likely to accrue from the discovery were first fairly developed on the Hudson, we are perfectly prepared to show, that *there* certainly the idea did not originate; that it was altogether of British, or rather of Scottish origin; and from documents now in our possession, we have little doubt of being able to set this disputed question for ever at rest, to the satisfaction of the public, and to prove that to the individual whose name stands at the head of this memoir, the world is indebted for all the benefits they enjoy by means of that wonderful fabric, the Steamboat.

In 1787, Mr. Miller engaged in a sailing match with a party of gentlemen at Leith, in his double vessel, against a first-rate sailing wherry. Mr. Taylor was, of course, on board; and to this circumstance may be attributed the primary projection of applying the steam-engine to navigation. Mr. Miller's vessel won the day, and Mr. Taylor felt perfectly convinced of the efficiency of the *principle* by which it was wrought; but, having taken a spell at the wheels, he found the labor so excessive, that he told Mr. Miller, that, unless he could apply a more commanding power than that of men, the invention would be of little use. Mr. Miller acknowledged the justice of the observation, and requested the aid of his cogitations on the subject, adding, that the only other plan he himself could think of was the employment of the capstan. Mr. Taylor's thoughts forthwith became steadfastly directed to the subject; and after much reflection, and many conversations with his employer, he at last suggested the steam-engine. Mr. Miller started many objections on the score of the danger of fire, &c.; but at last, after great persuasion, and not until Mr. Taylor had demonstrated by drawings the practicability of connecting the engine with the wheels, he agreed to have a small engine built, and to give the plan a trial. Accordingly, on the family coming into Edinburgh for the winter, from Dalswinton, Mr. Taylor was requested to find out a proper engineer for the purpose; and a young acquaintance of his, named William Symington, employed at the lead mines at Wanlockhead, Dumfrieshire, and who had invented a new construction of the steam-engine, (by throwing off the air pump,) being at the time in Edinburgh for his education, he recommended and introduced him to Mr. Miller. It was then agreed that the experiment should be made on the lake at Dalswinton, in the ensuing summer, (1788.)* In the autumn, Symington was sent for to Dalswinton to put the parts together, and fit the engine upon the vessel, a handsome double pleasure-boat. The experiment which followed succeeded perfectly; the vessel moving at the rate of five miles an hour, notwithstanding the smallness of the cylinders, which were only five inches in diameter. This trial took place in presence of hundreds of people, and an account of it, drawn up by Mr. Taylor, was inserted in the Dumfries Journal the same month, (Oct.) It was also noticed in the Scots' Magazine of the following November.

In 1801 or 1802, Mr. Symington, who, up to this time, had never laid the shadow of a claim to Mr. Taylor's invention, induced Lord Dundas to employ him to fit up a vessel for the Forth and Clyde Canal Company. This was accordingly done, but when set a-working, the agitation of the water and consequent washing of the banks, which it caused, was so alarming, that the Company would not permit it to be used again, and it was laid up at Lock Sixteen. It happened that, at this period, Mr. Fulton, the American engineer, was travelling in Britain for information in the line of his profession, and, whilst visiting the Carron works, in company with Mr. Henry Bell, then a carpenter at Glasgow, first heard of the steamboat. He forthwith applied to Mr. Symington, who resided in Falkirk, for leave to inspect the boat, which was immediately complied with, and every information readily furnished. The consequence was, that both Mr. Fulton and Mr. Bell immediately conceived the project of separately turning the invention to their own account. Mr. Fulton launched his first boat on the Hudson in 1807, and he and his country claimed the merit of the invention. Mr. Bell was somewhat tardier in his movements, and it was not until 1812 that his first steam-vessel, the Comet, was set a-going on the Clyde—when he, like Mr. Fulton, also claimed the merit of the invention. In the mean time it appears that Mr. Symington, too, not only laid pretensions to it, but had secretly taken out a patent so far back as the year 1802 or 1803. This stealthy step, however, of which neither Mr. Taylor nor Mr. Miller had the slightest suspicion, serving him nothing: for when he raised an action of damages upon it in 1815, against the proprietors of the Clyde steamboats, they defended themselves successfully on the plea that he was not the original inventor. Mr. Symington's unfair and continued interference, and the discovery of the surreptitious patent, of which Mr. Taylor was not made aware, until long afterwards, and not until many years after Mr. Miller's death, seem to have called forth an indignant remonstrance from Mr. Taylor, as we find by a letter of Mr. Symington, dated February, 1821, evidently intended to soothe his irritation, and promising to pay him one-half of the interest and proceeds of the patent.

Very shortly after Mr. Taylor's decease, application was made to the government, by one of his relatives, on behalf of his widow and family, in which some pretensions, brought forward at the time by Mr. Symington, in a letter to the editor of the Edinburgh Evening Courant, were most satisfactorily refuted. In this communication to government, also, a letter was quoted, penned so far back as the year 1787, by Mr. Symington to Mr. Taylor, in which that gentleman so explicitly acknowledges the originality of the conception of the applicability of the steam engine to the purposes of navigation, as belonging to the subject of this memoir, that it seems altogether incomprehensible how he could ever afterwards presume to attempt the appropriation of it to himself. An extract from this letter of Mr. Symington, as well as of his promissory epistle to Mr. Taylor, of February, 1821, is subjoined; and it is thought proper here to state, that the originals of these, as well as of many other communications between the parties on the same subject, have been submitted to the inspection of one of the editors of this publication. Mr. Symington subsequently attempted to renew his pretensions in a communication to the editor of the Ayr Advertiser; but these were so thoroughly set at rest by a respondent in the same publication, that it is unnecessary here to allude to them more particularly.

"I must make some remarks on your summer's invention, which, if made to perform what its author gives it out for, will undoubtedly be one of the greatest wonders hitherto presented to the world, besides being of considerable emolument to the projector. Great success to you, although overturning my schemes; but take care we do not come upon your back, and run away with them by some improvement. Your brother John gives a kind of credit to your report, which, for some reasons, I did not discourage. I must conclude, &c. &c.

(Signed) WM. SYMINGTON."

"Sir,—In terms of our former agreement, when making experiments of sailing by the steam engine, I hereby bind and oblige myself to convey to you, by a regular assignation, the one-half of the interest and proceeds of the patent taken by me upon that invention, when an opportunity occurs of executing the deed, and when required. I am, Sir, your obedient servant, (Signed) WM. SYMINGTON.

"To Mr. James Taylor, Cumnock."

For further information respecting Mr.

* And in 1786.

* Referred to at page 164, vol. iv.

Taylor's claims to be the inventor, see page 164, vol. iv., of the Mechanics' Magazine.

NEW-YORK AMERICAN.

DECEMBER 27—31, 1834.

LITERARY NOTICES.

LETTERS TO ADA, from her brother-in-law; by the author of *Father Rowland*, &c. 1 vol. New York: *Harper & Brothers.*—Catholicism has a copious armory, and weapons fitted to all services. This is a light and withal somewhat sentimental and poetical appeal to young misses, "my Adas," and such like, whom honied words, and skilful flattery, can influence to adopt the creed and practices of the "Mother Church."

RECOLLECTIONS OF A HOUSEKEEPER: by Mrs. CLARISSA PACKARD. 1 vol. New York: Harper & Brothers.—This is not, as from the title some might suppose, a book of receipts for puddings and pies, cakes and jellies, but of very good moral instruction agreeably imparted. Not the least interesting and well written chapter is that of "reading a lesson of temperance."

THE CLASSICAL LETTER-WRITER; by the author of The Young Man's Own Book. 1 vol. Philadelphia: Key & Biddle.—A very prettily bound and printed little volume, designed for the use of young persons of both sexes, to give them ease and facility in letter writing,—a charming accomplishment by the way,—by setting before them a series of well selected letters on different subjects, by eminent persons, and accompanying them with some judicious and plain rules of composition. It is quite a book to be sought for.

THE SUNDAY SCHOOL TEACHER'S COMPANION. New York: N. B. HOLMES.—This excellent little volume is compiled, as far as we can judge, with much discretion, the fruit of experience as a Sunday School Teacher, from various publications, heretofore made with the same object. It is, as the compiler says, not a book to read through, and then cast aside, but to be kept as a companion to be consulted, whenever the teacher is in doubt, or hesitation. To this end, the extracts made are adapted to various heads, each one of which is enumerated in the index. We commend this little volume to Sunday School Teachers.

THE AMERICAN POPULAR LIBRARY. Conducted by an association of gentlemen. 1 vol. Boston: J. Allen & Co. New York: Wiley & Long.—Here we have a new enterprize for the amusement and instruction of the community. The design of the conductors of it is to publish a series of volumes under the above title, not to consist of American works, nor to exclude them, but to embody such selections as shall be of enduring value, and not merely attractive by reason of their novelty. The conductors have another aim, in which we most cordially desire they may be encouraged to persevere, that of combining elegant literature and pure Christianity. Too little has this been attended to, especially in our country, where, because no religion is established by law, it seems to be considered an evidence of freedom from prejudice, and almost of patriotism, to avoid any reference, in works of taste, to topics connected with our Faith. We hail, therefore, the expression by the Editors of their purpose "to promote by their publication, as far as shall be in their power, the union of polite literature, sound learning, and Christian morals."

It is intended that a volume shall be issued every two or three months, of nearly uniform size, and each for sale separately. The volume before us, the first in the series, is entitled "Leisure Hours," composed of various tales from various authors, intended and calculated to be what the title expresses, a companion for "Leisure Hours." Some of these tales have been published in different journals among us before: the mass, however, are not accessible to all; and as a collection, we are sure this volume will please.

SABBATH-DAY BOOK. 1 vol.
WEEK-DAY BOOK. 1 vol.
FAMILY STORY BOOK. 2 vols.

ADAM THE GARDENER. 1 vol; by Charles COWDEN CLARKE, author of Tales in Prose from Chaucer.—Boston: J. Allen & Co. New York: Wiley & Long.

In addition to the undertaking to furnish a popular library for adult readers, we have here a series of works for children and young persons published under the revision of the same association of gentlemen. The first four volumes are partly original and partly compiled from other sources. They are well printed, have a few wood cuts scattered through the pages, and every where the occasional seriousness of the lessons inculcated is relieved by apposite stories and anecdotes. The same regard, too, is had in these minor works to purity of thought as well as of language, and to the importance of striving to make amusement and instruction go hand in hand with a sound and moral religious tone.

The last volume, "Adam the Gardener," is a republication from England, and is the first in a series to be called the "*Juvenile* Popular Library." It is a charming little book, which, while giving really useful knowledge and directions about gardening, has so many stories interwoven, so much good sense and useful information diffused throughout, as to render it quite an agreeable book, both for children and young persons, and those who are older. The directions about gardening, &c. being adapted to the meridian of England, must of course be applied in this country with some discretion, though in the Southern parts of this State, and still more so in the States immediately south of us, they will not need probably to be much varied.

FAMILAR CONVERSATIONS, EXPLANATORY OF THE NEW TESTAMENT. New-York: J. K. PORTER.—This is a little pocket volume, well designed, and well executed, conveying, in the form of a dialogue, a connected view of the books and personages of the New Testament.

THE PORTION OF THE SOUL; or, Thoughts on its Attributes and Tendencies, as indicating its Destiny. By the Rev. HERMAN HOOKER. Philadelphia: Henry Perkins.—The discussion in this volume, according to the preliminary notice, "had its origin in the fact, that the Scriptures seem often to speak of a *communicable* fulness of God, as the proper and highest good of rational creatures, and that all experience that the soul is empty, and cannot find what is suitable to fill it, in any of the forms of created good." This statement will suggest the course of thought which has been pursued.

THE YOUNG MAN'S POCKET COMPANION. New-York: DANIEL COOLIDGE.—This miniature pocket volume contains Washington's Farewell, the Constitution of the United States, the Declaration of Independence, the Articles of Confederation, and other high political matter, which no American should be ignorant of, and which could hardly be put together in a more convenient and portable form—a complete political *Vade-mecum*.

COMPLETE WORKS OF SIR WALTER SCOTT,—parts xxxix and xl—N. Y. CONNER & COOKE. These are parts of the 1st volume, and comprize *Auchindrane* or the Ayrshire tragedy, Paul's letter to his Kinsfolk, the Essay on Chivalry, Romance, the Drama &c.

THE YOUNG MUSCOVITE,—a novel,—edited by Capt. *Frederick Chamier*, R. N.—2 vols. N. Y. HARPER & BROTHER.

THE LAST DAYS OF POMPEII,—1 vol. N. Y. HARPER & BROTHERS.—We have no space to do more than mention these books to day, the first purporting to be a translation from a Russian novel, the second presenting in one well printed and handsomely got up volume, the last remarkable work of *Bulwer*,—for the exceedingly low price of *half a dollar!*

FOREIGN INTELLIGENCE.

FOREIGN NEWS.—The Havre packet ship Charlemagne, *Pierce* Master, in a passage hitherto, as far as we remember, unprecedented in shortness at this season of the year, brings Paris papers to 3d inst.

The Chambers had assembled, but the King, after the matter had, it would seem, been much discussed in his Cabinet, permitted the session to commence without any speech from the Throne, considering this as merely an adjourned meeting from July, when he delivered a speech. Nothing can mark more strongly an embarrassed position with regard to his Cabinet and the Chambers, than such a course, indicating, as it seems to do, a want of unity between the Sovereign and his Ministers, and no little distrust of the Chamber. *Non committal* is never the policy of the strong. The treaty with this country is evidently a stumbling block. It must, however, be got over. The shortness of the Charlemagne's run to the Westward, authorises the supposition that the vessels bound Eastward would have long passages, in which case the President's message may not reach France till the Chambers had considered and decided upon our treaty. On the presumption that their decision will be favorable, we hope such may be the case.

From England, although the accounts are a week later, there is no additional intelligence, as the Leader of the new State team, Sir R. Peel, had not yet returned from Italy. The impression seems to be, however, that the Duke means to go for the people and reform!—at least so far as the abuses in the Church establishment are concerned. We shall believe when we see.

Not the least extraordinary item of intelligence is that of Lord Brougham's having *begged* of Lord Lyndhurst, his successor on the wool-sack, that he, Lord Brougham, might be appointed *Chief Baron of the Exchequer!* under the new administration. The Courier thus comments on this proceeding:

LONDON, Nov. 28.—It was whispered, on Wednesday, that Lord Brougham had made an offer to Lord Chancellor Lyndhurst, and we know that the Tories were then boasting of it. We did not ascertain the truth of the fact until yesterday morning, and we then heard it confirmed. The substance of the Lord Chancellor's reply to Lord Brougham's letter was as follows:—Lord Lyndhurst, after acknowledging the receipt of the letter, informed Lord Brougham that it was not intended to fill up the vacant offices until the return of Sir Robert Peel; that his Lordship's letter should be communicated to Sir Robert on his return; and that it would depend on Sir Robert, if Prime Minister, and on the individual who might then hold the Seals, whether his Lordship's offer should not be accepted.

Seriously, we view Lord Brougham's offer, in all the circumstances of the case, to be one of the most extraordinary that ever was made by any public man. How would the learned person have sneered and scoffed had Mr. Croker offered to continue to discharge the duties of Secretary to the Admiralty to Lord Grey, that the public might save his retiring pension, or had Lord Elden offered to undertake the duty of Chief Justice when Lord Denman was appointed. If Lord Brougham really wish to save the public money, he has only to do as Sir James Graham has done—refuse to take it. We might say more, but we content ourselves with merely remarking, that of the various characters in which Lord Brougham has performed, his friends certainly do not consider that of a Judge to be the one *in which he has been most successful.*—[Courie.]

The Duke of Gloster "Silly Billy" is dead: he is cousin to the King.

M. Rothschild was assaulted on the Exchange on

the 24th by a person named Priuen, who, at the moment of renewing his attacks was seized by a son of M. Rothschild and handed over to a constable.

Paris, November 24th.—It is said to have been decided on Friday in the Council, that the Bill relative to the 25 millions claimed by the United States, shall be presented to the Chamber in one of its earliest sittings. M. Thiers, it is added, affirms that he shall be able to carry it.

The *Courier Francais* says, "the motive assigned by M. Bresson for declining the proffered seat in the Cabinet was the impossibility of his supporting the Government with respect to the payment of the 25 millions to the United States. M. Bresson asserts, that when he was Secretary of Legation in the United States, he had an opportunity of knowing that the money, if awarded, would not go to persons who had really experienced losses, and that he could not, as a Minister, support what he conceived to be contrary to the interests of France."

The *Courier Francais*, referring to the Ministerial explanations, says:—"Thus then the day for explanations is fixed. The public will be witness of the conflict, and will overwhelm with ridicule the braggadocios who may be afraid to enter the lists. The *tiers parti* will be victorious if it preserve its dignity and if its Chief should not abandon it. M. Passy, M. Etienne, will speak to the purpose. New speakers such as M. Sauzet may appear. The Opposition doubtless will afford its aid, but in order to give confidence to the hesitating mass of the Centres, M. Dupin must take part in the debate. He is the indispensable speaker of the future Ministry, and without him the Ministry cannot exist. The Chamber will make that reflection, and a wager may be laid that it will not follow the movement unless M. Dupin take the lead."

Later from France.—Another arrival, the *Silvie de Grasse*, in the unprecedented passage at this season, of 19 days from Havre, brings us Paris papers to the 10th December.

We are disappointed in finding that up to the 9th, the King's Minister had not submitted any motion respecting the American treaty. On Monday the 8th various *projets de loi* were referred by the Chamber to Committees. Among them, one concerning the responsibility of Ministers, one concerning the accounts of 1832, another respecting the Custom House and tobacco, and the House then adjourned, as a House, though the members of the Committees meet meanwhile—to Saturday 13th. We are concerned greatly, thus to find the time fleeting, without any movement in our affairs—for we cannot but apprehend more and more, serious difficulties and embarrassments if the President's Message reach Paris, before the Legislature has passed on the indemnity.

From England.—By the Montreal, from London, there are papers of the 8th December. Sir Robert Peel was hourly expected. He passed through Paris on the 7th December, having left Rome—where the messenger who was sent by the Duke of Wellington to ask his return, found him at a ball, at the banker's, Count Torlonica's—on the 26th November. Until he should be on the spot, nothing would be decided about the new ministry. Rumours, however, were frequent that overtures would be made to Lord Stanley and others who with him left the *Grey* ministry, on the Irish Church question, to join the Duke. If so, this would seem to preclude the idea of concession on that question.

Addresses to the King, against a Tory Ministry, were multiplying.

Advices from Lisbon to the 2d had been received by express from Falmouth, which announces that the Queen, Donna Maria, was married by proxy to the Duke of Leuchtenburgh (the Duke of Terceira officiating) on the 1st, when the greatest enthusiasm was displayed by all parties in Lisbon, and the public rejoicings are described as having been general and splendid.

A Portuguese corvette, with the Duke of Leuchtenburg on board, arrived at Gibraltar, on the 16th Nov.

Spain.—The Memorial des Pyrennees states a rumor of a sanguinary engagement between the forces of Mina and Zumalacarregui, in which the former was only saved by a vigorous charge from being made prisoner. The news of the dismissal of the remnant of Whigs from power in England, produced a panic among the Quesnites in Madrid.

London, Dec. 8.—*Two o'clock, p. m.*—We remain without any news, and business in the Money market is very limited, and without fluctuation. Consols being still 92 to 92 1-2 for the Account. Exchequer Bills are 40 41, and India Bonds 21 23 premium.

In the Foreign Market, Dutch Five per Cent. stock is 99 1-2 3-8; Two and a Half per Cent. 53 7-8 54; Belgian 98 to 1 2; Russian 106 to 1-2; Spanish 53 3 4 to 5-4; and Portuguese 84 to 1-4.

SUMMARY.

The Creator.—"Who but the Omnipotent could have formed the sun, could have marked out its destined course, suspended it without support in the blue vault, saying, 'this be thy station, and this thy brilliant seat?' Could any power, save that of the Eternal, have created the earth, the moon, and all the planets? these undeviatingly perform their course within the orbits he has prescribed them."

Little Rock, Dec. 2.—*The Eclipse of the Sun*, on Sunday last, was witnessed here in its fullest grandeur. It commenced about half-past 11 A. M., and ended about 20 minutes after 2 P. M.—duration about 2 hours and 50 minutes. The obscuration of the sun was fully total for the space of 2 1-2 or 3 minutes, commencing about 3 minutes before 1 o'clck. One large star was visible for more than an hour, and we understand several others were seen. The weather was perfectly clear—not a cloud to be seen—affording a most excellent opportunity of witnessing this magnificent phenomenon of nature in all its sublimity.—[Arkansas Gazette.]

Gallantry.—A person advertises in the Daily Advertiser, that he has found a lady's kid glove, near Mrs. Le Cain's, Pearl street, and adds, whoever has lost the same if as beautiful as Cinderella, may have the glove and the hand of the gentleman who found it, if agreeable to her.

The passengers by the Rail Road Cars from Philadelphia, were, it seems, exposed to much inconvenience on Monday by reason of a deep snow drift in the track, which they encountered about four miles from Amboy. Unable to proceed, the passengers, including several ladies, remained all night in the Cars, and were only relieved by sleighs early on Tuesday morning. Why did they not go back? The road they had come over was certainly open and the engine could have pushed them back if it could not have been turned so as to drag them. There was certainly want of proper care and foresight in this matter, on the part of the Company's servants.

Airy enterprize in the West.—A Mr. Kirby, who had perviously made two unsuccessful attempts to "clear out for the clouds," in a balloon from Cincinnati, succeeded in his third trial on the 15th inst. and actually ascended to a great height—coming down afterwards in perfect safety, and without at all injuring his balloon.

Intercourse between the Cities of New York and Brooklyn.—It is estimated that as many as ten thousand persons, with several hundreds of carriages, from coaches to hand-carts, pass daily at the Fulton Ferry. The ferriage for a single person is 4 cents—amounting daily for 10,000 persons to $400. Supposing 400 vehicles of all sorts and horses to pass daily at an average price of 25 cents each, the receipt further would be $100, making $500 perdiem, or for the 365 days, composing the year, the enormous sum in gross of $182,500. The capital which produces this enormous return, consists we believe, of four steamboats, costing at the outside, we apprehend $10,000 a piece, and the docks, bridges &c. valued at $10,000, making $50,000, produce $182,500 subject to deduction for fuel, collectors, crew of the boats, repairs &c.

This is the fruit of monopoly,—and it is such a monopoly as this, that some of the uptown interest of this city wishes to perpetuate, by refusing to Long Island a new South ferry.

Indian Antiquities.—On Saturday last, says the Pawtucket Chronicle, the bones of an Indian, and seven guns, four brass kettles and seven bottles of spirits, were dug out of a bank to the southward of the Meeting House, near the stone bridge, in Tiverton, State of Rhode Island.

A Horse at a Supper Table.—Last evening, just after dark, a horse and sleigh came full speed down Pearl-street, and on arriving at Fulton-street, the horse sheered a little to the left, and entered the Refectory under Holt's building, leaving the sleigh behind. The animal received no injury; and, after paying his respects to those who were at table, he was unceremoniously "put out," being considered an uninvited guest.

True Friendship.—"The water that flows from a spring does not congeal in winter; and those sentiments of friendship which flow from the heart, cannot be frozen by adversity."

Great Minds.—"One of the surest marks of a great mind is the confidence with which it knows how to inspire others. The frailties of great men form the comfort and delight of fools."

Steamboat Lost.—On the 11th inst., the steamboat Champlain left St. Louis for Cincinnati. About half past 11 o'clock at night, two miles below St. Genevieve, she ran foul of a large snag, and sank, so that in a few minutes there were three feet water in her upper cabin. It is supposed that three or four of the passengers were drowned.

Landing of the Pilgrims.—The anniversary of this ever to be remembered day, was celebrated at Plymouth, on Monday. The weather was fair and a large number of the respectable inhabitants of the adjacent towns were present. Among the guests, was His Honor, Lieut. Governor Armstrong. The address was delivered by the Rev. Mr. Blagden of this city, and was an effort worthy of the high reputation of the speaker and of the occasion. A melancholy accident happened in the course of the afternoon which excited the deepest sympathy for the venerable sufferer. Dr. Thatcher, well known as the author of the Revolutionary Journal, was thrown down and run over by a vehicle, and injured very severely. Being very deaf, he was not aware of the danger until it was too late to avoid it. The extent of the injury could not be ascertained at once, but from the advanced age of the Doctor, now eighty-two, the most serious apprehensions were entertained of the consequences.—[Boston Atlas.]

Senatorial Munificence.—The legislature of Indiana, at its last session, by joint resolution, required the governor to ascertain on what terms the hon. *John Tipton* would surrender to the state the *Tippecanoe* battle ground. The governor applied accordingly, and reported to the legislature, that Mr. Tipton proffers to "*transfer it without charge.*"

Anecdote.—An innkeeper in England, requested of Lord Wellington, to permit him to place his portrait over the door of his house, which was hitherto known as the sign of the *ass;* his lordship having consented, the new sign was hung up in due form, but a knowing one in the same line of business hoisted the old sign over his door; and the sign of the ass being a well known stopping place, travellers poured in at the new establishment, to the great regret and mortification of the Wellington host, who to prevent utter desertion, wrote under the portrait of the noble Duke, "*This is the real Ass.*"

A curious fact relative to the procuring of otter furs is related in an Ohio paper. Improving the hint suggested by the fact of the superiority of "live" feathers over those plucked from the dead fowl, we are told that a Mr. Entz, of Cambridge, in that State, has succeeded in the experiment of domesticating the wild otter, and rendering it a source of profit by the fur picked from its body. It is added that the tame otters yield two crops a year, and that the quality of the fur is superior in fineness and gloss to that taken from the skin of the dead animal. Mr. E. is going extensively into the business of taming otters, muskrats, &c. for their live fur. His estimate of the annual profit of an otter, at the present prices of furs, is about fourteen dollars.

An Earthquake.—The Georgetown, Ohio, Castigator of the 24th ultimo, says—A severe shock of an earthquake was felt at this place by a number of our citizens, at about half past one o'clock, P. M. on last Thursday. The first appearance was that of a loud

rumbling noise, succeeded by a tremendous shaking. The same was felt at Maysville, Ky., at about the same hour of the day.

Another Shipwreck on Lake Ontario.—A correspondent at Pultneyville, of the Wayne Sentinel, gives the following particulars relative to the wreck of the schooner General Brock: "The British schooner General Brock, Capt. Campbell, from Prescott, U. C., bound to Toronto, seventy tons burthen, laden with merchandise, was run ashore about two miles west of Pultneyville, during a severe gale on Sunday, the 14th inst., at about 3 o'clock P. M., but was not discovered until 4, when the people of the village were notified and went to their relief, and in the evening all on board, seventeen in number, including one female, were got on shore—but not without much hazard and some frozen limbs. They were all taken to the house of William Waters, where they received every attention necessary. The greater part of the deck load was hove overboard before she struck — They were on the lake about 15 hours after the storm had become extremely severe, the wind blowing from the northward, accompanied with snow.— The cold was intense. Considerable of the remaining cargo was got on shore, which is not much damaged, but much yet on board will be entirely lost, it being on board. The loss, at best, will be very great, though it is said the goods are insured. Much credit is due to those who aided in relieving the sufferers from their distressed condition."—[Oswego Patriot.]

The pride of woman has an hypocrisy which can deceive the most penetrating, and shame the most astute.

When we experience neither candor nor justice in mankind, it almost drives us in despair to suppress every generous emotion, and to exist in a state of carelessness, hardness, forgetfulness, and self-indulgence.

Fraternal Generosity.—The late Mr. Grawshay, in the testamentary disposal of his property, bequeathed the bulk of his immense fortune to three sons and one of his daughters, almost entirely overlooking his other daughter, Mrs. Frederick Wood.— The three brothers and the sister of that lady, with a fraternal affection which does them the highest honor, have within the last week, each presented her with 5,000*l*; which, with the sum of 20,000*l*. originally presented to her by her father, makes her fortune equal to 40,000*l*.

The Wife of Lafayette.—The following is taken from that portion of Mr. Everett's beautiful tribute to the memory of this friend of America, and champion of liberal principles, which relates to the attempt of his wife to effect his liberation from the dungeons of Olmutz:

Relieved from anxiety on account of her son, the wife of Lafayette was resolved, with her daughters, to share his captivity. Just escaped from the dungeons of Robespierre, she hastened to plunge into those of the German Emperor. This admirable lady who, in the morning of life had sent her youthful hero from her side to fight the battle of constitutional freedom beneath the guidance of Washington, now goes to immure herself within the gloomy cells of Olmutz. Born, brought up, accustomed to all that was refined, luxurious and elegant, she goes to shut herself up in the poisonous wards of his dungeon—to partake his wretched fare; to share his daily repeated insults; to breathe an atmosphere so noxious and intolerable, that the gaolers, who bring them their daily food, are compelled to cover their faces as they enter their cells.

Landing at Altona on the 9th of September, 1795, she proceeded with an American passport, under the family name of her husband (Motier,) to Vienna. Having arrived in that city, she obtained, through the compassionate offices of Count Rosenberg, an interview with the Emperor. Francis II, is not a cruel man. At the the age of twenty-five he has not yet been hardened by long training in the school of state policy. He is a husband and a father. The heroic wife of Lafayette, with her daughters, is admitted to his presence. She demands only to share her husband's prison, but she emplores the Emperor to restore to liberty, the father of her children. —"He was indeed, Sire, an officer in the armies of republican America; but it was at a time when the daughter of Maria Therese was foremost in his praise. He was indeed a leader of the French revolution; but not in its excesses, not in its crimes: and it was owing to him alone, that on the dreadful 5th of October, Marie Antoinette and her son had not been torn to pieces by the blood thirsty populace of Paris. He is not the prisoner of your justice, nor your arms; but was thrown by misfortune into your power, when he fled before the same monster of blood and crime, who brought the king and queen to the scaffold. Three of my family have perished on the same scaffold, my aged grand-parent, my mother, and my sister. Will the Emperor of Germany close the dark catalogue, and doom my husband to a dungeon worse than death?— Restore him, Sire, not to his army, to his power, to his influence, but to his shattered health, his ruined fortunes,—to the affection of his fellow citizens in America, where he is content to close his career,— to his wife and children."

The emperor is a humane man. He hears, considers, reasons, hesitates;—tells her his hands are tied by reasons of state, and permits her to shut herself up, with her daughters, in the cells of Olmutz! There her health soon fails; she asks to be permitted to pass a month at Vienna to recruit it, and is answered that she may leave the prison whenever she pleases; but if she leaves it, is never again to return. On this condition, she rejects the indulgence with disdain, and prepares herself to sink, under the slow poison of an affected atmosphere, by her husband's side. But her brave heart—fit partner for a hero's—bore her through the trial;—though the hand of death was upon her. She prolonged a feeble existence of ten years, after their release from captivity but never recovered the effects of this merciless imprisonment.

[*From Dr. Lieber's Letters from America to a Gentleman in Germany.*]

I always have considered Mahomed very impolitic for denying women a soul, and the Andalusians ought to be ashamed to this day, that their forefathers, the gentlemen of Gades, according to Strabo, prohibited women from entering their temple of Hercules. But I really wish ladies would keep out of the way where they are not in their sphere. I would say, "Don't shew this passage to the ladies of your family," did they not know already my opinion on this point, and, moreover, that it originates from my great veneration of the sex.

A poor fellow of a traveller wants, for instance, to hear the great men of the nation "talk." He goes to Washington; by eleven o'clock, the morning after his arrival, he proceeds to the Senate, though its business only begins by twelve o'clock. He thinks he has secured a seat. But by that time ladies begin to drop in; presently they seize upon all the seats. Very well, allow the poor fellow but a fair *stand*, but no, he is obliged to squeeze himself in a corner, pressed in from all sides; mercy ye gentle souls, allow him but a free passage from his ear to the debaters, and treat the rest of his body as though it were a bale of cotton under the hydraulic press! The prayer is said; he stretches his neck like a turtle, and turns his eyes away, in order to bring his ear the better into a position that it may catch a sound, which Echo, more merciful than the ladies, may throw into it. His twisted neck begins to ache; his eyes are closed, he thinks "now for the treat," when, unhappily, some officer of the Senate taps him on the shoulder: "Sir, there are ladies coming," at the same time, shuffling and pushing chairs over the heads of innocent listeners and constituents, crammed in like the camomile flowers of the Shaking Quakers; but they have nothing to do here, it seems. At last, the officer succeeds in working a passage, and lo! as if a canal of bonnets, feathers, and veils, had broken through, in they rush; there is no use in resistance "when this element breaks through."— Without a single "I beg your pardon," or betraying the least sorrow at disturbing you, the ladies drive the poor man out of his last retreat; "out with you, badger, out with you!" he must needs give way, the contrary would be rude; and—*manes blancas no ofenden*. The poor man who has come, say five hundred miles, to hear the Senate, is standing, by this time near the door, with a longing look toward the President, if he has found an opportunity to turn his head back again; and now the debates begin, but, alas! the ladies, also, begin, and our unlucky traveller retires, all he has heard of the Senate having been a lisping from sweet lips, directed, perchance, to a polite Senator himself. I truly and sincerely think, that legislative halls are, generally speaking, not places precisely calculated for ladies, for many and, I humbly think, very weighty reasons.

Taken all in all, it seems to me, that woman, in the best times of the Roman republic, had a position in society as near to what she ought to have, as at any other period of the world, and with any nation. Thus much is certain, that the history of no people has recorded so many adorable examples of female virtue and elevation of soul, as the history of "better Rome." But Lucretia, Valeria, Veturia, Volumnia, Cornelia, Portia, and the late and noble Aria, never went to the Senate-house. I know full well that our society, resting on different principles from that of ancient Rome—witness our refinement, our industry, our generally diffused system of education, our social intercourse, which has grown out of a natural transformation of that of the chivalric times, of which, nevertheless, many elements have passed over as integrant parts of the new order of things,—has different demands, and requires different positions in the members composing it; yet much is ever to be learned, from whatever once was great.

Why not have, in the good old style of the early church, a box with lattice work, of some seats for a few matrons; but as to giving up the whole place, left for humble listeners, to young ladies of sixteen, and seventeen, who turn the senate house into a lounging place; it is, permit me to say it with a bow, which craves indulgence, unfair. Now, if a law were passed that no lady under twenty five years should be admitted, I bet my life the whole difficulty would be removed. The English, as yet the great masters of what I would call parliamentary management, in which we are the next best, but the French, to no little injury of their whole scheme of liberty, are totally deficient, do not admit ladies, except on some particular occasions, in the gallery of the house of lords.

Suppose, the same disappointed man, whom we have seen swimming, without success, against the current in the senate-house, is desirous of hearing an oration on some political subject, to be delivered in a public hall or church. He starts early, to be certain of a place, but, oh Jove, protector of the strangers! when he arrives, all seats, below and in the first rank above, are already taken by the ladies, whose pretty heads are in as quick motion as their fans, which gives to the whole scene the appearance of an agitated sea between breakers. But the stranger espies a yet empty space; to this he directs his course; it is difficult, and may cost him a flap of his coat, but never mind, he is anxous to hear the orator of the day. He penetrates at length, to the spot where he expects to rest in peace. "Sir," says, very politely, a man with a short stick in his hand, "these seats are reserved for the gentlemen who form the possession.' Confound it, internally exclaims the disappointed man, and makes his exit.— I remember, I was once unable, on occasion of the delivery of a Latin oration at a public commencement of some college, to penetrate a crowd of ladies, composed, almost without exception, not of mothers, but of young fashionables. I am resolved to do my best to get up a *Polite anti-ladies-thronging-poor-men-out-of-every-chance-of-seeing-any-thing-Society*, and have branches established all over our Union. If I am made president, I'll certainly use my influence to get Mr. Stuart elected an honorary and corresponding member.

The Navies of France and England.—We gave the other day, from an official French journal of last year, an account of the French Navy. We now translate from the same periodical for January of this year, a comparative statement of the English and French Navy, as to the number of ships and officers:—

Comparison between the Navy of France and England.—According to official documents, the officers of the English Navy are, 44 Admirals, 62 Vice Admirals, 64 Rear Admirals, 43 Rear Admirals on half pay, 786 Captains, 877 Commanders, 279 Lieutenant Commanders, 3172 Lieutenants, 487 Masters, 625 Quarter Masters. 1088 Medical Officers, 63 Chaplains.

There are 22 ships of 100 guns and over, 99 seventy-four gun ships and over, 104 frigates of and above 42 guns, 22 steam vessels, and 310 ships ranging from 40 to 36 guns—in all 557 vessels.

The officers of the French Navy are, 3 Admirals, 12 Vice Admirals, 22 Rear Admirals, 70 Captains of line of battle ships, 70 Captains of frigates, 90 Captains of corvettes, 450 Lieutenants of line of battle ships, 550 do of frigates, 315 Medical Officers, 12,500 Masters, Seamen, and boys.

There are 40 line of battle ships of from 74 to 80 guns, 52 frigates of 1st, 2d, and 3d rate, 25 corvettes, 17 steam ships, 300 brigs, schooners, gun boats, &c.

England, with three times as many ships and officers as we, spends only 125 millions of francs annually, [25 millions dollars] on its Navy. Ours costs 70 millions francs, [14 millions dollars.]

PAY TO NAVY OFFICERS.—The House of Representatives has been for some time engaged on, and has finally adopted in committee, a bill for raising, as is most just and proper, the pay of the Navy.

The Journal of Commerce gives the following as the exact provisions of the bill, *as reported to the House by the Committee of the Whole.* It is to go into operation from the date of its passage:

The Senior Captain.—The bill provides that the Senior Captain shall receive, at all times when in service, $4500. When on leave of absence or waiting orders, $3500.

All other Captains—When commanding squadrons or coast stations, and when acting as Navy Commissioners, $4500. When commanding Navy Yards $4000. When on other duty, $3750. When on leave of absence or waiting orders, $3000.

Masters Commandant.—On sea service, $2500; on other duty, $2000; waiting orders, $1800.

Lieutenants.—Commanding, $1800; on other duty, $1500; waiting orders, $1200.

Assistant Surgeons,—Waiting orders, $650; at sea, $950. After passing, and found qualified for promotion to Surgeon, $850; at sea, $1200; stationed at Navy yards, hospitals, rendezvous, and receiving ships, $950. After being passed, and stationed as above, $1250.

Surgeons.—First five years after date of commission, $1000; second do, $1200; third do, $1400; fourth do, $1600; afterwards, $1800. An increase of one-fourth on those rates, when under orders for duty, at Navy yards, receiving vessels, rendezvous, or naval hospitals; an increase of one-third when ordered to any vessel for sea service; an increase of one-half, when ordered as fleet surgeons; and three-fourths, when appointed to perform the duties of Surgeon General. When attached to vessels for service, or at Navy yards, $1400; when on leave of absence or waiting orders, $900.

Chaplains.—When attached to vessels for sea service or at navy yards, $1200. On leave of absence or waiting orders, $800.

Professors of Mathematics.—When attached to vessels for sea service, or in a yard, $1200.

Secretaries.—To commanders of squadrons when commanding in chief, $1000, do. when not commanding in chief, $900.

Sailing Masters.—Of a ship of the line for sea service, $1100; on other duty, $1000; on leave of absence, or waiting orders, $750.

Second Masters.—Attached to vessels for sea service, $750; on other duty, $500; on leave of absence or waiting orders, $400.

Passed Midshipmen.—Attached to vessels for sea service, 600; on other duty, $500; on leave of absence, or waiting orders, $400.

Warranted Masters' Mates.—Attached to vessels for sea service, or at navy yards, $450; on leave of absence, or waiting orders, $300.

Midshipmen.—Attached to vessels for sea service, $400; on other duty, $350; on leave of absence, or waiting orders, $300.

Clerks.—Of a yard, $900; first Clerk to a Commandant of a Navy Yard, $900; second do., $750; clerk to commanders of squadrons, captains of fleets, and commanders of vessels, $500.

Boatswains, Gunners, Sailmakers, Carpenters.—Of a ship of the line for sea service, $750; of a frigate for do. $600; when on other duty, $500; when on leave of absence, or waiting orders, $360.

General Provisions.

Officers temporarily performing duties delonging to those of a higher grade, shall receive the compensation allowed to such grade, while actually so employed.

No officer shall be put on furlough except at his own request: and all officers so on furlough, shall receive two thirds of the pay allotted to leave of absence.

An Assistant Surgeon, having been absent on duty when others of his date were examined, shall, if not rejected at a subsequent examination, be entitled to the same rank with them; and if from any cause his relative rank cannot be assigned to him, he will retain his original position on the register.

Only one ration per day allowed to any officer when attached to vessels for sea service.

The compensation above specified, shall be in full for pay and subsistence, and for all allowances in lieu of cabin furniture to commanders of vessels and squadrons, and for all allowances to officers attached to Navy Yards, or employed on any shore duty, except for detention and employment on special service, for house rent or chamber money where quarters or public accommodations are not provided, and for travel under orders, for which 16 cents per mile shall be allowed.

From the pay of commission and warrant officers, hereafter to become due, the Secretary of the Treasury is directed to deduct 3 per cent. and to pay the same to the Secretary of the Navy and the Navy Commissioners, as a fund, in connexion with other monies, for the relief of the widows, children, widowed mothers and unmarried sisters of said commission and warrant officers.

The distribution of prize money to the officers, seamen, and marines of the Navy, shall hereafter be in proportion to the pay of such officers, seamen and marines, respectively.

THE CAUSE OF TEMPERANCE is the cause of all; for the curse of Inemperance falls with its withering blight, in some way, more or less, upon all. It is, therefore, with unfeigned satisfaction, we give place to the following notice, handed to us for publication, by the President of the New York State Temperance Society. Of the meritorious character of this gentleman, of his unwearing zeal and virtuous enthusiasm in the great cause to which he has dedicated himself, this is not the place to speak at large; but we could not insert the notice of such a result, as is announced below, without some allusion to the individual through whose instrumentality it was effected:—

The following gentlemen have agreed to contribute the sums set opposite to their respective names, towards the support of the Press, the efficient agent under Divine Providence, in the great cause of Temperance. The Executive Committee take this mode of tendering their heartfelt thanks to the gentlemen who have thus so generously and so liberally come forward in aid of this noble cause:—

Stephen Van Rensselaer, Albany,		$1,000
Henry Dwight, Geneva,	- - -	1,000
A. Champion, Rochester,		1,000
E. Corning, Albany,	- - -	1,000
Samuel Ward, New York,	- -	1,000
Brown, Brothers & Co.,	do., - -	1,000
Peter Remsen,	do., - -	1,000
Boorman & Johnston,	do., - -	1,000
John Jacob Astor,	do., - -	1,000
P. G. Stuyvesant,	do., - -	1,000
J. W. Leavitt,	do., - -	1,000
Charles Hoyt, Brooklyn,	- -	1,000
Anson Blake, New York,	- -	1,000
A Friend,	- - - - -	1,000
E. C. Delavan, Albany,	- -	1,000
		$15,000

The leading object, as we understand, of this munificent subscription, is to enable the friends of Temperance to disseminate more and more widely through the land their admirable exhortations and rebukes.

COLUMBIA COLLEGE, S. C.—Governor *McDuffie*, in his Message to the Legislature, thus refers to this College, of which it will be remembered the noted *Dr. Cooper* was the President, and the affairs of which had been closely investigated by the Board of Trustees:

"This investigation has resulted in a most thorough conviction, founded upon information derived from authentic sources in every quarter of the State, that the Faculty of the College have become so generally obnoxious to our fellow-citizens, on the score of the supposed religious heresies of some of them, and of the relaxation of moral and general discipline, and have so irrevocably lost the public confidence as suitable persons to guard the morals and mould the opinions of the rising generation, as to render a radical reform and thorough re-organization of the institution, a measure of indispensable necessity, and the only practicable means of reviving its prosperity and extending its usefulness."

As the first step, they have invited all the members of the Faculty to resign—and these have promptly complied with their request. They have proceeded to fill the vacancies, and appointed the four following Professors:—1st. "Mr. Dew, now a Professor in the College of William and Mary, in Virginia, has been elected Professor of Political Economy and History." 2d. "Mr. Cogswell, of Massachusetts, who has been for many years known to some of the members of the Board, as the head of an eminently successful institution in that State, has been elected Professor of Greek and Roman Literature." 3d. "Mr. Davies, now and for many years past, acting as the Professor of Mathematics in the Westpoint Academy, has been elected Professor of Mathematics, Mechanical Philosophy and Astronomy." 4th. "Professor Nott, whose scholarship and devotion to the College, are well know to us all, has been re-elected Professor of Logic and Belles Lettres."—The Governor asks for $20,000 to repair the buildings, &c.

[From the Salem Gazette of Friday.]

We observe, in a perusal of the debates in the French Chamber of Deputies, that it appeared to be agreed on all sides, that as under our embargo law no American vessel could lawfully navigate the ocean all those who were found on it were trading on British account, and were lawful prize under the French decrees. Some of the American editors, we perceive, fall into the same error. The fact, however, was otherwise. At the time the embargo was laid, a great number of our vessels were at sea engaged in their usual commerce; many of them on distant voyages. Their absence, especially as no previous notice could be given to them, was strictly justifiable under the law; and as no obligation was imposed on them by the law to return, they committed no offence by remaining abroad. Other vessels inconsiderable in number, left the United States, in violation of the law. The latter committed an offence against their country, but none against foreign powers. They were not disfranchised by the act. They were entitled to the protection of their government, and it had a right to inflict on them the penalty to which their conduct had exposed them. The government of France could withdraw them from neither of these claims.

Rather Cool.—The thermometer at Eastport on Mondoy morning last, stood at 13 degrees below zero, and at Calais, at 18 below.

Duke of Newcastle.—A poor fellow having with difficulty procured an audience of the late Duke of Newcastle, told his grace he came to solicit from him something by way of support, and as they were of the same family, being both descendants from Adam, he hoped he should not be refused. Surely not, said the Duke, there is a penny for you, and if all the rest of your relations give you as much, you'll be a richer man than I am.

Irish Biography.—An Irish writer thus concludes a biography:—"This extraordinary man has left no children behind him, except his *brother who was killed at the same time.*"

[From the New Monthly Magazine for November.]

THE FALLEN LEAVES.—BY THE HON. MRS. NORTON.

We stand among the fallen leaves,
Young children at our play—
And laugh to see the yellow things
Go rustling on their way;
Right merrily we hunt them down,
The autumn winds and we;
Nor pause to gaze where snow-drifts lie,
Or sunbeams gild the tree.
With dancing feet we leap along
Where wither'd boughs are strown:
Nor past nor future checks our song—
The present is our own.

We stand among the fallen leaves
In youth's enchanted spring—
When Hope (who wearies at the last)
First spreads her eagle wing.
We tread with steps of conscious strength
Beneath the leafless trees.
And the color kindles in our cheek
As blows the winter breeze;
While, gazing towards the cold grey sky,
Clouded with snow and rain,
We wish the old year all past by,
And the young spring come again.

We stand among the fallen leaves
In manhood's haughty prime—
When first our pausing hearts begin
'To love the olden time;"
And, as we gaze, we sigh to think
How many a year hath pass'd
Since 'neath those cold and faded trees
Our footsteps wander'd last;
And old companions—now perhance
Estranged, forgot, or dread—
Come round us, as those autumn leaves
Are crush'd beneath our tread.

We stand among the fallen leaves
In our *own* autumn day—
And, tott'ring on with feeble steps,
Pursue our cheerless way
We look not back—too long ago
Hath all we loved been lost;
Nor forward—for we may not live
To see our new hope cross'd;
But on we go—the sun's faint beam
A feeble warmth imparts—
Childhood without its joy returns—
The present fills our hearts!

MECHANICS' MAGAZINE,

THE NOVEMBER NUMBER is now ready. It contains Judge Baldwin's Address before the American Institute, verbatim, corrected by himself; a supplemental account of articles exhibited at the Fare, and a great variety of interesting scientific intelligence, both American and European.

The Mechanics' Magazine and Register of Inventions and Improvements is published by the Proprietors, D. K. Minor & J. E. Challis, at No. 25 Wall-street, New York: in *weekly* sheets of 16 pages, at 6¼ cents—in monthly parts of 64 pages, at 25½ cents—in volumes of 384 pages, in cloth boards, at $1.75—or at $3 per annum, in advance.—James Kneass, (formerly proprietor of the London Mechanics' Magazine,) Editor.

The following encomiums on the MECHANICS' MAGAZINE AND REGISTER OF INVENTIONS AND IMPROVEMENTS, are selected, from many others, from newspapers published in every section of the Union:

No respectable mechanic who feels the least interest in the manifold improvements of the age, should be without this, or some similar publication.—*Susquehannah Register.*

It ought to find its way into the house of every artisan, and no mechanic who desires to keep pace with the various improvements of the day, will be without it.—*Geneva Whig.*

There is no periodical in this country which more deserves the patronage of the mechanic than this, and which will better repay him for the expense incurred and the time spent in its perusal.—*Elmira Gazette.*

It contains information on almost every subject connected with mechanics, and a register of inventions and improvements.—*Montreal Gazette.*

MILL DAM FOUNDRY FOR SALE,

☞ The Proprietors of the Mill Dam Foundry offer for sale or lease, their well known establishment, situated one mile from Boston. The improvements consist of

No. 1. *Boiler House*, 50 feet by 30 feet, containing all the necessary machinery for making boilers for *Locomotive* and other steam Engines.

No. 2. *Blacksmith's Shop*, 50 feet by 20, fitted with cranes for heavy work.

No. 3. *Locomotive House*, 54 feet by 25, used for putting together Locomotive Engines. Several of the best Engines in use in the United States have been put in this establishment.

No. 4. A three story brick building, covered with slate, 120 feet by 46, containing two water-wheels, equal to 40 horse power; Machine Shop, filled with lathes, &c.; Pattern Shop; Rolling Mill and Furnaces, capable of rolling 4 tons of iron per diem, exclusive of other work; three Trip Hammers, one of which is very large; Engine for blowing Cupola Furnaces, moved by water-wheel; one very superior 12 horse Steam Engine, which could be dispensed with; and a variety of other machinery.

No. 5 An Iron Foundry, 80 feet by 45, with a superior air Furnace and two Cupolas, Core oven, Cranes, &c. fitted for the largest work. Attached to the Foundry is a large warehouse, containing Patterns for the Castings of Hydraulic Presses, Locomotive and other Steam Engines, Lead Mill Rolls, Gearing, Shafts, Sheves, Grates, &c. &c. These were made of the most durable materials, under the direction of a very scientific and practical Engineer, and are supposed to be of great value.

No. 6. A building, 65 feet by 36, containing a large stack of chimneys, and furnaces, for making Cast Steel. This building is at present used as a boarding-house, and can accommodate a large number of men.

No. 7. A range of buildings, 200 feet long by 36, containing counting room, several store rooms, a Brass Foundry, room for cleaning castings, a large loft for storing patterns, stable for two horses, &c. &c.

The above establishment being on tide water, presents greater advantages for some kinds of business than any other in the United States. Coal and Iron can be carried from vessels in the harbors of Boston, to the wharf in front of the Factory, at 25 to 30 cents per ton. Some of the largest jobs of Iron work have been completed at this establishment; among others, the great chain and lift pumps for freeing the Dry Dock at the Navy Yard Charleston.

The situation for Railroad work is excellent, being in the angle formed by the crossing of the Providence and Worcester Railroads. The Locomotive "Yankee," now running on the latter road, and the "Jonathan," purchased by the State of Pennsylvania, were built at these works. With the Patterns and Machinery now in the premises, 12 Locomotives and as many tenders, besides a great quantity of cars and waggons, could be made per annum.

For terms, apply to
THOS. J. ECKLEY, Treas', &c., Boston, or to
ROBERT RALSTON, Jr., Philadelphia.

Boston, Dec. 20, 1834.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

☞ Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N.Y. sept.18-1y

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York,
January 29, 1833.

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

J31 6

RAILROAD AND CANAL MAP.

THIS long promised Map is now ready for those who wish it. Its size is 34 by 40 inches. It is put up in a convenient pocket form, in morocco covers, and accompanied by over 70 pages of letter press, giving a concise description of, or reference to, each Road and Canal delineated on the Map. It will also be put up in *Marble Paper* covers, so as to be forwarded by mail to any part of the country; the postage of which, cannot exceed 44, and probably not 25 cents, to any part of the county.

Published at 25 Wall street, N. Y, by
A12 tf D. K. MINOR & J. E. CHALLIS.

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:

The New York American Daily, at $10.00—Tri-Weekly, at $5.00—Semi-Weekly, at $4.00 in advance.

The American Railroad Journal, Weekly, at $3.00 per annum.

The Mechanics' Magazine, two volumes a year, at $3.00 per annum.

The Quarterly Journal of Agriculture and Mechanics, at $5.00 per annum, or $1.25 per number.

The Family Magazine, 416 pages a year, at $1 50 in advance.

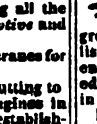
The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at $1 00 in advance, now in the 5th volume, bound volumes $1.25

The Ladies' Companion, of 54 pages a month, at $3.00 per annum, in advance.

The Rochester Gem, at $1.50 in advance.

All Communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.

ALBANY SEED STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail will be forwarded gratis. Orders solicited early, as the better notice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications to wit:—NEW YORK FARMER and American Gardener's Magazine; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly*: *either* or *all* of which may be seen and obtained by those who wish them, by calling at 247 *North Market street, Albany.* tf

TO RAILROAD COMPANIES.

☞ The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to. DEAN WALKER. a3

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

Troy N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 229 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily accreasing demand for his Spikes.

J23 1am H. BURDEN.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 23 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine-wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, pag 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¾ inch, } *Flat Bars* in
200 do. 1½ do. ¾ do. } lengths of 14 to 16
40 do. 1¼ do. ¾ do. } feet counter sunk
800 do. 2 do. ¾ do. } holes, ends cut at
800 do. 2½ do. ¾ do. } an angle of 45 degrees with splicing plates, nails
soon expected. } to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels

Axles of 2¼, 2¾, 2½, 3, 3¼, 3½, and 3¾ inches diameter for RailwayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

SURVEYING AND ENGINEERING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street,
Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.
Germant. and Norris. Railroad.

m1 1y

ERRATUM.—The following lines should have been inserted at the commencement of the third page of this number, (page 819,) but were accidentally omitted.—[PRINTER.]

AX, BX', *converging* in advance. It is evident that the same signs will appertain to both of the figures 3 and 4; that is, $\propto = +3$, $B = -2$, and $z = -10°$. And therefore in this case,

$$\sin. T' = \frac{\overline{12-2}\cdot\text{Cos. } 10° + \overline{17+3}\cdot\text{Sin. } 10°}{\overline{12-2}|^2 + \overline{17+3}|^2} =$$

Extract of a letter from a friend:

"I will just say for your own gratification that the surveys of the Rochester and Olean Canal are completed. Great care has been taken to make them as perfect as possible, and the report, which will appear early, will be favorable."

We learn from the Springfield Pioneer that the Mad river railroad is to be commenced early next spring:

MAD RIVER AND LAKE ERIE RAILROAD.—At an annual meeting of the stockholders, convened agreeably to the Charter, on the third Monday, (20th) Oct., 1834, at Urbana, the following officers were duly elected:

Joseph Vance, Esq., President.

Horatio G. Phillips, Charles G. Swain, Pierson Spinning, Charles Cavileer, Jonathan Harshman, John C. Pearson, Benjamin M. Piatt, Robert Patterson, Josiah Hedges, John G. Camp, Isaac A. Mills, Talman Wildman, Directors.

At a meeting of the Directors present, held the same evening, they re-elected John H. James as Treasurer, and Jeremiah Warder, Secretary; and appointed a committee, consisting of Joseph Vance, H. G. Phillips, and Talman Wildman, to carry into effect the object of the Company, by procuring further subscriptions of stock, and putting the work into operation at as early a day as practicable. Adjoured to the first Wednesday in April, at Urbana, unless sooner convened by the President.

NEW YORK AND ERIE RAILROAD.—The influence which this enterprise is destined to exercise over large portions of our country, and the interest already felt far beyond the limits of its immediate field, may be judged by the annexed extract, which we make from a Journal printed in the town of Monroe in the Michigan Territory.

[*From the Monroe Journal and Michigan Inquirer.*]

In the year 1832, the Legislature of New York, incorporated the New York and Lake Erie Railroad Company.

This enterprise, to its projectors so honorable, and to our Territory so important, we have witnessed with deep interest; and we rejoice that measures are to be adopted which must ensure its consumation.

The Report of the Engineers who explored the route, is more favourable than was anticipated; and we understand that the Common Council of the city of New York have recently entered into the spirit of the subject, and that the Company are about to ask Congress to extend to them a helping hand.—Michigan having before Congress a petition for similar aid, the construction of a Railroad across the Peninsula, this subject, to our citizens, is one of peculiar interest. But taken as a component part of the great line of direct, rapid, and cheap communication contemplated from the Valley of the Mississippi through Illinois to Lake Michigan, and by the Wabash Canal to Lake Erie, its importance can hardly be appreciated.

The fertility of our soil—the amazinng current of immigration which is winding its way into every part of our Territory, and the great commercial facilities which are presented upon every side of us, all conspire to render the enterprise to which we have alluded, to us, of incalculable benefit. To Illinois, Indiana, and the northern parts of Ohio, the benefits resulting from thie great enterprise will be no less important, and with a confidence, that twenty years since, we did not dream of, we anticipate, that at no distant period, the produce of those fertile and beautiful states, and the immense region of country beyond them, will find its out-let through this new and splendid avenue.

NEW YEAR'S DAY was kept in old fashioned style very generally. The beauty of the day seemed to animate every one; and one half,—though not the better half,—of our citizens were in active movement, from early morn to,—not dewy, but freezy,—eve, to visit the other. It was altogether a jubilee of kindness and good will.

NEW BANKS.—The Legislature of this State will convene at Albany next Monday. Applications will be made, in the course of the session, for the following new Banks, and probably others.

	Capital.
Cortland Co. Bank, Cortlandville.	$200,000
Oxford Bank, Chenango Co.	200,000
Tompkins Co. Bank, Ithica	250,000
Olean do Cattaraugus Co.	100,000
Canal Bank of Lockport, Niagara Co.	300,000
do do do	250,000
Kingston Bank, Ulster Co.	200,000
Delaware Co. Bank, Delhi	150,000
Fredonia Bank, Chautauque Co.	100,000
Phenix Bank of Lewiston, Niagara Co.	250,000
Clinton Co. Bank, Plattsburgh	200,000
Inland Bank and Insurance Company, Ithica Tompkins Co.	300,000
Dunkirk Bank, Chautauque Co.	200,000
Owego Bank, Tioga Co.	200,000
Wool Growers Bank Norwich, Chenango Co.	200,000
Farmers Bank at Batavia, Genessee Co.	200,000
City Bank of Buffalo, Erie Co.	600,000
Bank of Brockport, Monroe Co.	200,000
Putman County Bank, Carmel	200,000
Increase of Capital.	
Ogdensburgh Bank	100,000
Jefferson County Bank	120,000
Saratoga County Bank	100,000
Union Bank N. York	1,000,000
Greenwich Bank do	300,000
Total	$5,920,000

Notice for applications are also published in the Argus for the following Rail Road Companies.

Syracuse and Utica Railroad Co.	1,200,000
Rochester and Lockport	400,000
Ithica and Auburn, do	600,000
Attica and Buffalo. do	250,000
Rochester and Syracuse, do	2,000,000
	$4,450,000
also for the	
Canisteo Canal Co	200,000
Erie Insurance Co. Buffalo.	200,000

ORATION OF J. Q. ADAMS IN HONOR OF LAFAYETTE.—On Wednesday there was no sitting of Congress, the day being devoted to the speech of Mr. Adams in honor of Lafayette. Our letter sketches that speech partially; and the writer says of it, we doubt not justly, that it was eminently worthy both of the subject and the orator.

The delivery of it occupied two hours and a half, in the course of which, frequent indications of a disposition to applaud were manifested in the galleries and privileged places. At the conclusion of the oration, "members of all parties," as we are told, "vied with each other in tendering their congratulations to Mr. Adams on the admirable manner in which he had fulfilled the honorable duty confided to him."

The fact noticed in our Washington letter, that *not a single representative of a crowned head, though all invited*, was present on this occasion, is worthy of note.

HANDSOME NEW YEARS GIFT TO THOSE CONCERNED.—The Atlantic Insurance Company (Marine) have declared a dividend of *Ten per cent* out of the profits of the last six months.

RAILROAD CARS,

Messrs. D. & J. MITCHELL, Eclipse Foundry, Hollidaysburgh, Huntington county, Pennsylvania, are now prepared to manufacture, at short notice, any number of Railroad Cars—in the most approved and substantial manner. jan. 24 t

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabethstreet, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation. J 15 tf

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

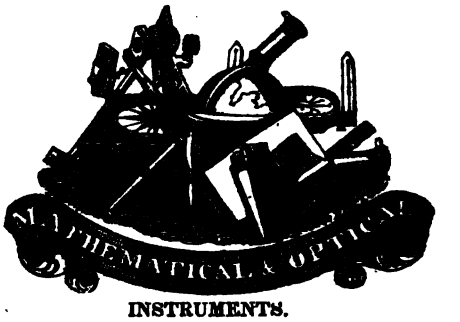
Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18



INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in your line, deserve our unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m29